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LIST OF DOCTORATE-GRANTING AND MASTER'S-  
GRANTING INSTITUTIONS

**Table 1. Total enrollment in all institutions of higher education, by level of enrollment and broad field by selected years: 1975-1998**

Year	Total	Under-graduate enrollment	Graduate enrollment					First professional enrollment
			Total, all fields	Sciences	Engineering	Health fields	All other fields	
Total, all U.S. institutions								
1975 .....	11,289,129	9,777,634	1,267,537	234,760	68,271	25,519	938,987	243,958
1980 .....	12,234,644	10,603,579	1,351,268	251,337	74,312	41,462	984,157	279,797
1985 <sup>1</sup> .....	12,411,945	10,749,752	1,384,862	262,068	95,991	45,962	980,841	277,331
1990 .....	13,983,255	12,110,847	1,596,037	289,510	107,625	55,043	1,143,859	276,371
1991 .....	14,527,724	12,595,335	1,648,952	299,121	113,576	58,565	1,177,690	283,437
1992 .....	14,657,118	12,693,778	1,679,644	312,609	118,035	62,988	1,186,012	283,696
1993 .....	14,477,792	12,482,813	1,699,292	319,028	116,858	68,563	1,194,843	295,687
1994 .....	14,449,476	12,417,701	1,734,371	318,228	113,023	73,291	1,229,829	297,404
1995 .....	14,445,438	12,399,826	1,745,130	315,356	107,199	77,177	1,245,398	300,482
1996 .....	14,481,915	12,424,570	1,756,474	312,140	103,223	78,856	1,262,255	300,871
1997 .....	N/A	N/A	N/A	306,656	101,033	79,682	N/A	N/A
1998 .....	N/A	N/A	N/A	304,993	100,287	80,474	N/A	N/A
Subtotal, 50 States and DC								
1975 .....	11,184,859	9,679,455	1,263,137	233,885	68,217	25,173	935,862	242,267
1980 .....	12,096,895	10,475,055	1,344,073	249,839	74,264	41,126	978,844	277,767
1985 <sup>1</sup> .....	12,247,055	10,596,674	1,376,181	260,170	95,889	45,410	974,712	274,200
1990 .....	13,818,637	11,959,106	1,586,165	287,840	107,516	54,447	1,136,362	273,366
1991 .....	14,358,953	12,439,287	1,639,135	297,316	113,408	57,936	1,170,475	280,531
1992 .....	14,487,359	12,537,700	1,668,737	310,795	117,825	62,252	1,177,865	280,922
1993 .....	14,304,803	12,323,959	1,688,413	317,168	116,645	67,824	1,186,776	292,431
1994 .....	14,278,790	12,262,608	1,721,469	316,344	112,826	72,517	1,219,782	294,713
1995 .....	14,261,781	12,231,719	1,732,470	313,332	106,982	76,283	1,235,873	297,592
1996 .....	14,300,255	12,259,417	1,743,099	310,131	102,969	78,040	1,251,959	297,739
1997 .....	N/A	N/A	N/A	304,616	100,750	79,201	N/A	N/A
1998 .....	N/A	N/A	N/A	302,719	100,020	79,902	N/A	N/A
Outlying areas								
1975 .....	104,270	98,179	4,400	875	54	346	3,125	1,691
1980 .....	137,749	128,524	7,195	1,498	48	336	5,313	2,030
1985 <sup>1</sup> .....	164,890	153,078	8,681	1,898	102	552	6,129	3,131
1990 .....	164,618	151,741	9,872	1,670	109	596	7,497	3,005
1991 .....	168,771	156,048	9,817	1,805	168	629	7,215	2,906
1992 .....	169,759	156,078	10,907	1,814	210	736	8,147	2,774
1993 .....	172,989	158,854	10,879	1,860	213	739	8,067	3,256
1994 .....	170,686	155,093	12,902	1,884	197	774	10,047	2,691
1995 .....	183,657	168,107	12,660	2,024	217	894	9,525	2,890
1996 .....	181,660	165,153	13,375	2,009	254	816	10,296	3,132
1997 .....	N/A	N/A	N/A	2,040	283	481	N/A	N/A
1998 .....	N/A	N/A	N/A	2,274	267	572	N/A	N/A

<sup>1</sup> NSF figures for 1985 include estimates for master's-granting institutions.

**KEY:** N/A = Not available

**SOURCES:** U.S. Department of Education/NCES, Survey of Opening Fall Enrollment, and National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering.

**Table 2. Graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
1975	303,031	234,760	26,310	12,079	16,892	8,415	10,702	46,398	36,191	77,773
1976	305,465	238,808	26,631	12,819	17,071	8,627	11,285	47,728	37,458	77,189
1977	311,741	243,056	26,855	13,455	16,052	9,108	11,677	49,234	38,617	78,058
1978 <sup>1</sup>	304,301	236,604	26,274	13,276	14,812	9,847	11,869	47,923	37,522	75,081
1979	319,092	247,364	26,695	13,737	15,031	11,690	12,240	48,199	39,766	80,006
1980	325,649	251,337	26,934	14,051	15,311	13,578	12,452	47,596	40,610	80,805
1981	332,041	252,486	27,357	14,266	15,881	16,437	12,355	46,639	40,666	78,885
1982	338,916	255,229	28,186	15,020	17,157	19,812	12,583	45,970	40,073	76,428
1983	347,017	255,898	29,453	15,453	17,358	23,333	12,429	45,644	40,905	71,323
1984 <sup>2</sup>	349,698	256,986	30,056	15,505	17,443	25,526	12,226	45,763	40,931	69,536
1985 <sup>2</sup>	358,059	262,068	30,981	15,420	17,563	29,769	11,561	46,112	40,721	69,941
1986 <sup>2</sup>	368,104	266,230	32,246	15,066	17,949	31,349	11,458	46,764	41,241	70,157
1987 <sup>2</sup>	373,341	269,388	32,727	14,371	18,508	32,051	11,118	46,747	42,612	71,254
1988	375,277	272,448	32,962	13,867	19,077	32,227	11,135	47,565	43,963	71,652
1989	382,747	278,704	33,616	13,643	19,247	32,482	11,190	48,852	45,528	74,146
1990	397,135	289,510	34,075	13,984	19,774	34,257	11,316	49,989	48,167	77,948
1991	412,697	299,121	34,710	14,480	19,952	34,610	11,506	51,778	51,343	80,742
1992	430,644	312,609	35,348	15,347	20,355	36,293	11,827	54,177	53,484	85,778
1993	435,886	319,028	35,318	15,805	20,000	36,189	11,914	56,452	54,557	88,793
1994	431,251	318,228	34,449	16,042	19,579	34,128	12,199	58,143	54,554	89,134
1995	422,555	315,356	33,417	15,805	18,509	33,432	12,367	58,736	53,641	89,449
1996	415,363	312,140	32,355	15,280	18,015	34,592	11,914	58,128	53,209	88,647
1997	407,689	306,656	31,108	14,644	16,729	35,996	11,814	57,135	53,207	86,023
1998	405,280	304,993	30,565	14,364	16,463	37,850	11,811	57,060	53,055	83,825
		Engineering								
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields
1975	68,271	1,670	5,034	12,560	16,320	11,663	8,601	2,352	10,071	25,519
1976	66,657	1,477	5,205	11,995	15,926	10,687	8,313	2,375	10,679	28,290
1977	68,685	1,518	5,201	12,335	17,406	10,438	8,722	2,559	10,506	33,675
1978 <sup>1</sup>	67,697	1,463	5,341	12,358	17,127	9,494	8,638	2,570	10,706	35,611
1979	71,728	1,481	5,605	12,822	17,715	10,729	9,251	2,756	11,369	38,517
1980	74,312	1,737	6,015	13,097	19,132	9,698	9,888	2,910	11,835	41,462
1981	79,555	1,883	6,496	14,089	20,113	9,737	10,618	3,125	13,494	43,117
1982	83,687	1,941	7,189	14,122	21,927	9,577	11,467	3,124	14,340	43,418
1983	91,119	2,305	7,563	14,910	25,295	9,247	12,911	3,447	15,441	43,457
1984 <sup>2</sup>	92,712	2,340	7,373	15,192	26,388	9,282	13,855	3,657	14,625	44,972
1985 <sup>2</sup>	95,991	2,538	7,150	14,902	28,203	10,499	14,157	3,943	14,599	45,962
1986 <sup>2</sup>	101,874	2,804	7,012	14,976	29,969	11,529	15,713	4,208	15,663	47,438
1987 <sup>2</sup>	103,953	3,015	7,111	14,682	31,399	12,220	16,366	4,366	14,794	48,171
1988	102,829	3,223	6,618	14,811	32,035	11,393	16,151	4,337	14,261	49,336
1989	104,043	3,524	6,460	14,909	33,257	11,094	16,265	4,594	13,940	51,820
1990	107,625	3,934	6,735	15,542	33,722	11,248	16,879	4,941	14,624	55,043
1991	113,576	4,120	7,127	17,398	35,182	12,676	17,730	5,160	14,183	58,565
1992	118,035	4,036	7,397	19,572	36,460	13,525	18,637	5,512	12,896	62,988
1993	116,858	3,940	7,516	19,583	35,314	13,596	18,477	5,363	13,069	68,563
1994	113,023	3,715	7,608	19,925	33,050	13,661	17,761	5,191	12,112	73,291
1995	107,199	3,343	7,424	19,218	30,747	13,143	16,363	4,920	12,041	77,177
1996	103,223	3,208	7,373	18,528	29,736	12,399	15,509	4,713	11,757	78,856
1997	101,033	3,083	7,247	17,049	30,618	11,736	15,045	4,649	11,606	79,682
1998	100,287	3,137	7,060	16,374	31,398	11,059	14,696	4,644	11,919	80,474

<sup>1</sup> Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 3. Male graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences									Social sciences
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology		
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	233,818	168,833	22,816	11,176	11,933	7,549	9,570	32,511	20,518	52,760	
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	229,812	163,960	22,202	10,850	11,009	9,367	9,575	30,318	19,424	51,215	
1980	231,253	163,280	22,338	10,844	11,247	10,491	9,594	29,295	19,027	50,444	
1981	232,193	160,384	22,348	10,848	11,400	12,228	9,533	27,992	17,900	48,135	
1982	235,340	160,428	22,767	11,297	12,079	14,366	9,498	26,797	16,976	46,648	
1983	240,498	159,186	23,576	11,552	12,158	16,719	9,290	26,293	16,648	42,950	
1984 <sup>2</sup>	242,152	159,737	23,898	11,632	12,275	18,653	9,088	26,246	16,180	41,765	
1985 <sup>2</sup>	247,421	162,510	24,474	11,493	12,209	22,208	8,570	26,208	15,597	41,751	
1986 <sup>2</sup>	253,686	164,177	25,384	11,119	12,470	23,497	8,505	26,293	15,377	41,532	
1987 <sup>2</sup>	256,149	165,159	25,613	10,592	12,912	24,036	8,166	26,314	15,683	41,843	
1988	254,005	164,300	25,465	10,062	13,301	24,033	8,038	26,304	15,502	41,595	
1989	256,849	166,406	25,815	9,785	13,262	24,494	8,045	26,618	15,673	42,714	
1990	263,394	170,441	26,007	9,865	13,575	26,058	7,981	26,947	15,822	44,186	
1991	271,845	173,984	26,146	10,025	13,654	26,340	7,939	27,643	16,556	45,681	
1992	280,397	179,595	26,504	10,489	13,806	27,838	8,059	28,702	16,650	47,547	
1993	279,289	180,123	26,116	10,745	13,362	27,767	7,826	29,399	16,567	48,341	
1994	272,120	177,146	25,290	10,689	13,044	26,043	7,911	29,988	16,416	47,765	
1995	262,341	173,156	24,327	10,336	12,248	25,306	7,935	29,890	15,877	47,237	
1996	253,629	168,658	23,303	9,786	11,794	25,802	7,502	29,360	15,403	45,708	
1997	245,643	163,336	22,257	9,187	10,857	26,123	7,280	28,513	15,528	43,591	
1998	241,828	160,615	21,831	8,733	10,483	27,206	7,112	28,003	15,314	41,933	
		Engineering									
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1977	64,985	1,485	4,827	11,507	16,696	9,683	8,449	2,376	9,962	11,109	
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	65,852	1,432	4,991	11,503	16,782	9,473	8,782	2,468	10,421	11,028	
1980	67,973	1,663	5,336	11,732	18,149	8,343	9,354	2,607	10,789	11,707	
1981	71,809	1,816	5,718	12,515	18,837	8,194	9,987	2,735	12,007	11,367	
1982	74,912	1,831	6,288	12,373	20,376	7,958	10,748	2,704	12,634	10,958	
1983	81,312	2,182	6,547	13,051	23,227	7,729	12,106	2,999	13,471	10,430	
1984 <sup>2</sup>	82,415	2,208	6,401	13,165	24,175	7,674	12,899	3,189	12,704	10,501	
1985 <sup>2</sup>	84,911	2,375	6,146	12,755	25,768	8,719	13,146	3,340	12,662	10,795	
1986 <sup>2</sup>	89,509	2,604	5,973	12,829	27,061	9,434	14,554	3,533	13,521	11,049	
1987 <sup>2</sup>	90,990	2,791	5,957	12,579	28,301	9,976	15,070	3,637	12,679	11,795	
1988	89,705	2,996	5,543	12,517	28,757	9,300	14,749	3,581	12,262	11,407	
1989	90,443	3,281	5,431	12,474	29,742	8,984	14,867	3,784	11,880	11,884	
1990	92,953	3,645	5,589	12,853	30,007	9,111	15,437	4,048	12,263	12,284	
1991	97,861	3,793	5,870	14,296	31,311	10,321	16,219	4,173	11,878	13,053	
1992	100,802	3,688	6,003	15,918	32,167	10,870	16,939	4,443	10,774	13,837	
1993	99,166	3,583	6,017	15,725	30,992	11,003	16,703	4,336	10,807	15,213	
1994	94,974	3,357	6,082	15,714	28,946	10,866	15,938	4,122	9,949	16,253	
1995	89,185	2,992	5,863	14,986	26,652	10,388	14,686	3,861	9,757	17,065	
1996	84,971	2,856	5,731	14,228	25,607	9,685	13,873	3,653	9,338	18,109	
1997	82,307	2,712	5,538	12,889	26,159	9,125	13,266	3,555	9,063	18,885	
1998	81,213	2,755	5,339	12,294	26,562	8,664	12,934	3,529	9,136	19,412	

<sup>1</sup> Master's-granting institutions were not surveyed in 1978.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 4. Female graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences									Social sciences
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology		
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977	77,923	74,223	4,039	2,279	4,119	1,559	2,107	16,723	18,099	25,298	
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	89,280	83,404	4,493	2,887	4,022	2,323	2,665	17,881	20,342	28,791	
1980	94,396	88,057	4,596	3,207	4,064	3,087	2,858	18,301	21,583	30,361	
1981	99,848	92,102	5,009	3,418	4,481	4,209	2,822	18,647	22,766	30,750	
1982	103,576	94,801	5,419	3,723	5,078	5,446	3,085	19,173	23,097	29,780	
1983	106,519	96,712	5,877	3,901	5,200	6,614	3,139	19,351	24,257	28,373	
1984 <sup>2</sup>	107,546	97,249	6,158	3,873	5,168	6,873	3,138	19,517	24,751	27,771	
1985 <sup>2</sup>	110,638	99,558	6,507	3,927	5,354	7,561	2,991	19,904	25,124	28,190	
1986 <sup>2</sup>	114,418	102,053	6,862	3,947	5,479	7,852	2,953	20,471	25,864	28,625	
1987 <sup>2</sup>	117,192	104,229	7,114	3,779	5,596	8,015	2,952	20,433	26,929	29,411	
1988	121,272	108,148	7,497	3,805	5,776	8,194	3,097	21,261	28,461	30,057	
1989	125,898	112,298	7,801	3,858	5,985	7,988	3,145	22,234	29,855	31,432	
1990	133,741	119,069	8,068	4,119	6,199	8,199	3,335	23,042	32,345	33,762	
1991	140,852	125,137	8,564	4,455	6,298	8,270	3,567	24,135	34,787	35,061	
1992	150,247	133,014	8,844	4,858	6,549	8,455	3,768	25,475	36,834	38,231	
1993	156,597	138,905	9,202	5,060	6,638	8,422	4,088	27,053	37,990	40,452	
1994	159,131	141,082	9,159	5,353	6,535	8,085	4,288	28,155	38,138	41,369	
1995	160,214	142,200	9,090	5,469	6,261	8,126	4,432	28,846	37,764	42,212	
1996	161,734	143,482	9,052	5,494	6,221	8,790	4,412	28,768	37,806	42,939	
1997	162,046	143,320	8,851	5,457	5,872	9,873	4,534	28,622	37,679	42,432	
1998	163,452	144,378	8,734	5,631	5,980	10,644	4,699	29,057	37,741	41,892	
		Engineering									
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields	
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1976	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1977	3,700	33	374	828	710	755	273	183	544	22,566	
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1979	5,876	49	614	1,319	933	1,256	469	288	948	27,489	
1980	6,339	74	679	1,365	983	1,355	534	303	1,046	29,755	
1981	7,746	67	778	1,574	1,276	1,543	631	390	1,487	31,750	
1982	8,775	110	901	1,749	1,551	1,619	719	420	1,706	32,460	
1983	9,807	123	1,016	1,859	2,068	1,518	805	448	1,970	33,027	
1984 <sup>2</sup>	10,297	132	972	2,027	2,213	1,608	956	468	1,921	34,471	
1985 <sup>2</sup>	11,080	163	1,004	2,147	2,435	1,780	1,011	603	1,937	35,167	
1986 <sup>2</sup>	12,365	200	1,039	2,147	2,908	2,095	1,159	675	2,142	36,389	
1987 <sup>2</sup>	12,963	224	1,154	2,103	3,098	2,244	1,296	729	2,115	36,376	
1988	13,124	227	1,075	2,294	3,278	2,093	1,402	756	1,999	37,929	
1989	13,600	243	1,029	2,435	3,515	2,110	1,398	810	2,060	39,936	
1990	14,672	289	1,146	2,689	3,715	2,137	1,442	893	2,361	42,759	
1991	15,715	327	1,257	3,102	3,871	2,355	1,511	987	2,305	45,512	
1992	17,233	348	1,394	3,654	4,293	2,655	1,698	1,069	2,122	49,151	
1993	17,692	357	1,499	3,858	4,322	2,593	1,774	1,027	2,262	53,350	
1994	18,049	358	1,526	4,211	4,104	2,795	1,823	1,069	2,163	57,038	
1995	18,014	351	1,561	4,232	4,095	2,755	1,677	1,059	2,284	60,112	
1996	18,252	352	1,642	4,300	4,129	2,714	1,636	1,060	2,419	60,747	
1997	18,726	371	1,709	4,160	4,459	2,611	1,779	1,094	2,543	60,797	
1998	19,074	382	1,721	4,080	4,836	2,395	1,762	1,115	2,783	61,062	

<sup>1</sup> Master's-granting institutions were not surveyed in 1978.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 5. Full-time graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences									
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences	
1975 .....	202,300	164,538	21,916	9,557	10,694	4,473	8,889	36,874	24,105	48,030	
1976 .....	204,861	167,979	22,252	10,091	10,952	4,748	9,436	37,905	25,643	46,952	
1977 .....	206,452	169,296	22,505	10,424	10,365	4,604	9,711	38,415	25,703	47,569	
1978 <sup>1</sup> .....	201,782	164,277	22,135	10,369	9,769	4,930	9,727	37,788	24,754	44,805	
1979 .....	209,044	169,077	22,535	10,625	9,667	5,853	9,952	37,996	25,848	46,601	
1980 .....	214,465	171,838	22,917	10,871	9,901	6,587	10,168	37,690	26,671	47,033	
1981 .....	218,003	172,278	23,307	10,934	10,152	7,445	10,312	37,277	26,570	46,281	
1982 .....	221,921	172,166	24,038	11,319	10,813	9,171	10,136	36,688	25,667	44,334	
1983 .....	229,456	175,548	25,204	11,968	10,955	10,600	9,976	36,740	26,561	43,544	
1984 <sup>2</sup> .....	231,015	175,848	25,852	11,734	11,309	11,436	9,908	37,114	25,969	42,526	
1985 <sup>2</sup> .....	233,992	178,096	26,669	11,334	11,816	13,861	9,250	37,001	25,335	42,830	
1986 <sup>2</sup> .....	242,826	182,660	27,762	11,249	12,388	15,020	9,341	37,809	26,255	42,836	
1987 <sup>2</sup> .....	247,205	185,273	28,412	10,435	13,043	15,336	9,094	38,235	27,256	43,462	
1988 .....	250,657	187,650	28,574	10,192	13,512	15,133	9,122	39,209	28,118	43,790	
1989 .....	256,906	192,531	29,207	10,021	13,681	15,606	9,070	40,348	29,348	45,250	
1990 .....	265,399	199,422	29,485	10,244	13,865	16,689	9,100	40,945	30,618	48,476	
1991 .....	277,174	206,140	30,117	10,373	14,256	16,516	9,289	42,700	32,258	50,631	
1992 .....	290,510	216,084	30,673	10,986	14,679	17,486	9,452	44,389	34,162	54,257	
1993 .....	294,030	220,233	30,611	11,367	14,530	17,374	9,468	46,481	34,782	55,620	
1994 .....	293,048	221,482	30,043	11,470	14,226	16,674	9,492	48,017	35,288	56,272	
1995 .....	287,253	219,479	28,902	11,275	13,410	16,490	9,620	48,330	35,222	56,230	
1996 .....	284,194	218,343	27,956	10,826	12,966	17,173	9,298	47,744	35,468	56,912	
1997 .....	280,708	215,122	26,892	10,550	12,144	18,334	9,110	46,997	35,607	55,488	
1998 .....	279,517	213,768	26,400	10,489	11,782	19,737	9,000	47,008	35,582	53,770	
		Engineering									
		Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields
1975 .....	37,762	1,245	3,515	7,363	8,278	4,152	4,931	1,787	6,491	17,387	
1976 .....	36,882	1,165	3,691	7,025	8,147	3,578	4,919	1,860	6,497	18,585	
1977 .....	37,156	1,187	3,873	7,094	8,528	3,343	4,883	1,951	6,297	20,324	
1978 <sup>1</sup> .....	37,505	1,140	3,938	7,335	8,509	3,249	4,950	1,973	6,411	21,248	
1979 .....	39,967	1,152	4,218	7,623	9,039	3,743	5,428	2,135	6,629	22,746	
1980 .....	42,627	1,327	4,490	7,958	9,963	3,736	5,841	2,254	7,058	23,983	
1981 .....	45,725	1,483	4,989	8,799	10,450	3,603	6,422	2,454	7,525	24,073	
1982 .....	49,755	1,522	5,608	9,381	11,533	3,807	7,267	2,478	8,159	22,875	
1983 .....	53,908	1,840	5,869	9,804	13,265	3,288	8,330	2,704	8,808	22,599	
1984 <sup>2</sup> .....	55,167	1,854	5,734	10,086	13,925	3,393	8,698	2,872	8,605	22,907	
1985 <sup>2</sup> .....	55,896	1,994	5,546	9,749	14,799	3,456	8,875	3,093	8,384	23,295	
1986 <sup>2</sup> .....	60,166	2,154	5,594	9,971	16,290	3,807	9,789	3,370	9,191	23,356	
1987 <sup>2</sup> .....	61,932	2,372	5,674	9,628	17,101	4,156	10,230	3,436	9,335	23,861	
1988 .....	63,007	2,533	5,359	9,946	17,706	4,295	10,416	3,466	9,286	24,537	
1989 .....	64,375	2,772	5,282	9,964	18,466	4,658	10,492	3,720	9,021	25,813	
1990 .....	65,977	3,010	5,443	10,128	18,675	4,770	10,867	3,930	9,154	27,431	
1991 .....	71,034	3,325	5,788	11,328	19,904	5,598	11,687	4,058	9,346	29,866	
1992 .....	74,426	3,306	5,946	12,454	20,996	6,081	12,383	4,274	8,986	32,099	
1993 .....	73,797	3,262	6,041	12,458	20,370	5,902	12,395	4,249	9,120	35,649	
1994 .....	71,566	3,000	6,105	12,641	19,412	5,910	11,875	4,108	8,515	39,081	
1995 .....	67,774	2,693	5,957	12,248	18,187	5,342	11,128	3,880	8,339	41,895	
1996 .....	65,851	2,576	5,909	11,791	17,989	5,128	10,690	3,693	8,075	44,259	
1997 .....	65,586	2,529	5,784	11,268	18,927	5,075	10,432	3,661	7,910	46,341	
1998 .....	65,749	2,565	5,601	11,046	19,790	4,942	10,073	3,702	8,030	48,092	

<sup>1</sup> Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 6. Male full-time graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	156,169	121,312	19,205	8,457	8,476	4,006	7,945	26,183	14,591	32,449
1977	154,398	119,499	19,293	8,641	8,083	3,845	7,903	25,866	13,949	31,919
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	151,981	115,444	19,044	8,404	7,497	4,803	7,745	24,480	13,277	30,194
1980	153,138	114,365	19,214	8,388	7,595	5,184	7,778	23,804	12,779	29,623
1981	154,075	112,963	19,306	8,361	7,612	5,718	7,884	23,189	12,007	28,886
1982	156,404	111,896	19,641	8,532	8,022	6,860	7,592	22,144	11,223	27,882
1983	161,537	113,248	20,371	8,995	8,037	7,961	7,448	21,961	11,361	27,114
1984 <sup>2</sup>	162,399	113,279	20,755	8,876	8,328	8,693	7,328	22,012	10,714	26,573
1985 <sup>2</sup>	164,198	114,583	21,241	8,500	8,614	10,806	6,853	21,798	10,232	26,539
1986 <sup>2</sup>	169,871	116,675	22,022	8,336	8,984	11,703	6,955	21,992	10,263	26,420
1987 <sup>2</sup>	172,140	117,491	22,384	7,759	9,481	12,005	6,716	22,099	10,422	26,625
1988	172,342	116,954	22,208	7,444	9,794	11,795	6,640	22,404	10,199	26,470
1989	175,106	118,867	22,547	7,268	9,746	12,355	6,557	22,736	10,467	27,191
1990	178,695	121,416	22,664	7,317	9,821	13,218	6,454	22,789	10,642	28,511
1991	185,090	123,739	22,845	7,197	10,035	13,035	6,424	23,498	10,957	29,748
1992	191,791	128,029	23,173	7,588	10,250	13,936	6,454	24,230	11,171	31,227
1993	190,864	128,266	22,888	7,815	10,096	13,791	6,281	24,920	11,189	31,286
1994	186,675	126,686	22,277	7,676	9,810	13,127	6,166	25,493	11,131	31,006
1995	179,834	123,556	21,238	7,387	9,213	12,840	6,158	25,297	10,903	30,520
1996	174,783	120,758	20,413	6,955	8,797	13,088	5,847	24,737	10,794	30,127
1997	170,168	117,094	19,458	6,676	8,171	13,541	5,598	24,030	10,846	28,774
1998	167,620	114,843	19,050	6,386	7,810	14,385	5,400	23,648	10,657	27,507
		Engineering								
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	34,857	1,142	3,457	6,512	7,850	3,199	4,797	1,751	6,149	7,503
1977	34,899	1,160	3,595	6,553	8,146	2,967	4,742	1,809	5,927	7,490
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	36,537	1,116	3,789	6,729	8,585	3,164	5,170	1,922	6,062	7,595
1980	38,773	1,273	4,025	7,059	9,405	3,071	5,525	2,023	6,392	7,725
1981	41,112	1,432	4,456	7,673	9,739	2,915	6,075	2,167	6,655	7,403
1982	44,508	1,449	4,936	8,140	10,715	3,042	6,834	2,170	7,222	6,869
1983	48,289	1,760	5,100	8,509	12,302	2,673	7,847	2,380	7,718	6,678
1984 <sup>2</sup>	49,120	1,768	5,002	8,648	12,775	2,769	8,137	2,518	7,503	6,675
1985 <sup>2</sup>	49,615	1,868	4,792	8,257	13,591	2,821	8,316	2,654	7,316	6,747
1986 <sup>2</sup>	53,196	2,006	4,806	8,484	14,823	3,073	9,162	2,849	7,993	6,707
1987 <sup>2</sup>	54,649	2,205	4,800	8,230	15,552	3,422	9,498	2,867	8,075	7,292
1988	55,388	2,365	4,567	8,381	16,024	3,559	9,581	2,887	8,024	7,231
1989	56,239	2,592	4,486	8,315	16,644	3,751	9,637	3,081	7,733	7,685
1990	57,279	2,811	4,547	8,347	16,719	3,862	10,019	3,238	7,736	8,029
1991	61,351	3,071	4,803	9,309	17,739	4,566	10,745	3,316	7,812	8,450
1992	63,762	3,043	4,849	10,126	18,570	4,906	11,297	3,467	7,504	9,033
1993	62,598	2,971	4,875	9,934	17,926	4,729	11,210	3,447	7,506	9,926
1994	59,989	2,722	4,912	9,855	17,021	4,612	10,658	3,268	6,941	10,753
1995	56,278	2,417	4,734	9,431	15,747	4,191	9,993	3,064	6,701	11,367
1996	54,025	2,293	4,594	8,937	15,441	4,037	9,500	2,878	6,345	12,350
1997	53,074	2,226	4,425	8,361	16,097	3,977	9,143	2,806	6,039	13,138
1998	52,777	2,251	4,209	8,109	16,621	3,855	8,840	2,810	6,082	13,585

<sup>1</sup> Master's-granting institutions were not surveyed in 1978.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 7. Female full-time graduate students in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	48,692	46,667	3,047	1,634	2,476	742	1,491	11,722	11,052	14,503
1977	52,054	49,797	3,212	1,783	2,282	759	1,808	12,549	11,754	15,650
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	57,063	53,633	3,491	2,221	2,170	1,050	2,207	13,516	12,571	16,407
1980	61,327	57,473	3,703	2,483	2,306	1,403	2,390	13,886	13,892	17,410
1981	63,928	59,315	4,001	2,573	2,540	1,727	2,428	14,088	14,563	17,395
1982	65,517	60,270	4,397	2,787	2,791	2,311	2,544	14,544	14,444	16,452
1983	67,919	62,300	4,833	2,973	2,918	2,639	2,528	14,779	15,200	16,430
1984 <sup>2</sup>	68,616	62,569	5,097	2,858	2,981	2,743	2,580	15,102	15,255	15,953
1985 <sup>2</sup>	69,794	63,513	5,428	2,834	3,202	3,055	2,397	15,203	15,103	16,291
1986 <sup>2</sup>	72,955	65,985	5,740	2,913	3,404	3,317	2,386	15,817	15,992	16,416
1987 <sup>2</sup>	75,065	67,782	6,028	2,676	3,562	3,331	2,378	16,136	16,834	16,837
1988	78,315	70,696	6,366	2,748	3,718	3,338	2,482	16,805	17,919	17,320
1989	81,800	73,664	6,660	2,753	3,935	3,251	2,513	17,612	18,881	18,059
1990	86,704	78,006	6,821	2,927	4,044	3,471	2,646	18,156	19,976	19,965
1991	92,084	82,401	7,272	3,176	4,221	3,481	2,865	19,202	21,301	20,883
1992	98,719	88,055	7,500	3,398	4,429	3,550	2,998	20,159	22,991	23,030
1993	103,166	91,967	7,723	3,552	4,434	3,583	3,187	21,561	23,593	24,334
1994	106,373	94,796	7,766	3,794	4,416	3,547	3,326	22,524	24,157	25,266
1995	107,419	95,923	7,664	3,888	4,197	3,650	3,462	23,033	24,319	25,710
1996	109,411	97,585	7,543	3,871	4,169	4,085	3,451	23,007	24,674	26,785
1997	110,540	98,028	7,434	3,874	3,973	4,793	3,512	22,967	24,761	26,714
1998	111,897	98,925	7,350	4,103	3,972	5,352	3,600	23,360	24,925	26,263
Engineering										
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields
1975	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976	2,025	23	234	513	297	379	122	109	348	11,082
1977	2,257	27	278	541	382	376	141	142	370	12,834
1978 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979	3,430	36	429	894	454	579	258	213	567	15,151
1980	3,854	54	465	899	558	665	316	231	666	16,258
1981	4,613	51	533	1,126	711	688	347	287	870	16,670
1982	5,247	73	672	1,241	818	765	433	308	937	16,006
1983	5,619	80	769	1,295	963	615	483	324	1,090	15,921
1984 <sup>2</sup>	6,047	86	732	1,438	1,150	624	561	354	1,102	16,232
1985 <sup>2</sup>	6,281	126	754	1,492	1,208	635	559	439	1,068	16,548
1986 <sup>2</sup>	6,970	148	788	1,487	1,467	734	627	521	1,198	16,649
1987 <sup>2</sup>	7,283	167	874	1,398	1,549	734	732	569	1,260	16,569
1988	7,619	168	792	1,565	1,682	736	835	579	1,262	17,306
1989	8,136	180	796	1,649	1,822	907	855	639	1,288	18,128
1990	8,698	199	896	1,781	1,956	908	848	692	1,418	19,402
1991	9,683	254	985	2,019	2,165	1,042	942	742	1,534	21,416
1992	10,664	263	1,097	2,328	2,426	1,175	1,086	807	1,482	23,066
1993	11,199	291	1,166	2,524	2,444	1,173	1,185	802	1,614	25,723
1994	11,577	278	1,193	2,786	2,391	1,298	1,217	840	1,574	28,328
1995	11,496	276	1,223	2,817	2,440	1,151	1,135	816	1,638	30,528
1996	11,826	283	1,315	2,854	2,548	1,091	1,190	815	1,730	31,909
1997	12,512	303	1,359	2,907	2,830	1,098	1,289	855	1,871	33,203
1998	12,972	314	1,392	2,937	3,169	1,087	1,233	892	1,948	34,507

<sup>1</sup> Master's-granting institutions were not surveyed in 1978.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 8. Full-time graduate students with U.S. citizenship or permanent resident status in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences									Social sciences	
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology			
1975 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 .....	166,192	141,456	17,186	9,484	6,647	4,521	7,872	33,171	25,461	37,114		
1981 .....	165,662	139,618	17,049	9,439	6,511	4,887	7,873	32,490	25,566	35,803		
1982 .....	166,743	138,270	17,584	9,693	6,926	5,981	7,676	31,720	24,588	34,102		
1983 .....	169,927	138,772	18,009	10,299	6,714	6,677	7,446	31,283	25,468	32,876		
1984 <sup>2</sup> .....	169,916	137,969	18,292	10,164	6,772	6,982	7,420	31,374	24,924	32,041		
1985 <sup>2</sup> .....	168,281	136,457	18,186	9,669	6,995	8,327	6,854	30,715	24,179	31,532		
1986 <sup>2</sup> .....	170,447	137,217	18,264	9,382	7,243	8,912	6,743	30,663	25,085	30,925		
1987 <sup>2</sup> .....	171,169	137,246	18,384	8,496	7,549	8,863	6,434	30,255	26,044	31,221		
1988 .....	170,236	136,725	18,130	8,040	7,738	8,415	6,443	30,244	26,802	30,913		
1989 .....	173,420	139,351	18,107	7,717	7,697	8,616	6,393	30,367	28,021	32,433		
1990 .....	177,804	143,340	17,836	7,813	7,961	8,742	6,215	30,286	29,133	35,354		
1991 .....	185,487	148,396	18,267	7,802	8,380	8,426	6,405	31,102	30,634	37,380		
1992 <sup>3</sup> .....	197,473	157,575	18,759	8,309	8,339	8,852	6,590	32,558	32,548	41,020		
1993 <sup>3</sup> .....	204,484	163,261	19,231	8,680	9,056	8,985	6,661	34,520	33,196	42,932		
1994 <sup>3</sup> .....	206,851	165,684	19,130	8,608	8,876	8,731	6,680	36,228	33,430	44,001		
1995 <sup>3</sup> .....	204,163	165,564	18,410	8,689	8,291	8,610	6,866	37,196	33,574	43,928		
1996 <sup>3</sup> .....	200,783	164,295	17,639	8,430	7,885	8,374	6,725	37,229	33,845	44,168		
1997 <sup>3</sup> .....	196,013	161,207	16,796	8,328	7,262	8,588	6,741	36,765	33,936	42,791		
1998 <sup>3</sup> .....	192,407	158,990	16,460	8,302	7,090	9,041	6,761	36,529	33,837	40,970		
		Engineering										
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	Health fields		
1975 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 .....	24,736	759	2,500	4,670	5,666	2,297	3,211	1,147	4,486	21,950		
1981 .....	26,044	882	2,787	5,162	5,665	2,029	3,363	1,342	4,814	21,938		
1982 .....	28,473	945	3,267	5,428	6,421	2,190	3,767	1,297	5,158	20,586		
1983 .....	31,155	1,088	3,630	5,544	7,398	1,933	4,327	1,530	5,705	20,201		
1984 <sup>2</sup> .....	31,947	1,115	3,603	5,687	7,890	1,934	4,591	1,663	5,464	20,561		
1985 <sup>2</sup> .....	31,824	1,258	3,337	5,282	8,137	1,874	4,858	1,805	5,273	20,762		
1986 <sup>2</sup> .....	33,230	1,343	3,412	5,303	8,572	2,053	5,218	1,854	5,475	20,665		
1987 <sup>2</sup> .....	33,923	1,559	3,353	5,090	9,002	2,145	5,559	1,829	5,386	21,103		
1988 .....	33,511	1,502	2,957	5,208	9,295	2,227	5,299	1,805	5,218	21,485		
1989 .....	34,069	1,757	2,668	5,097	9,723	2,426	5,632	1,890	4,876	22,527		
1990 .....	34,464	1,870	2,668	5,375	9,652	2,374	5,781	1,985	4,759	23,875		
1991 .....	37,091	2,201	2,798	6,140	9,976	2,760	6,120	2,067	5,029	26,105		
1992 <sup>3</sup> .....	39,898	2,246	2,948	7,003	10,577	3,076	6,803	2,247	4,998	28,406		
1993 <sup>3</sup> .....	41,223	2,178	3,107	7,440	10,428	3,209	7,228	2,264	5,369	31,832		
1994 <sup>3</sup> .....	41,167	1,862	3,370	7,848	10,467	3,180	7,090	2,335	5,015	35,448		
1995 <sup>3</sup> .....	38,599	1,611	3,304	7,652	9,382	2,863	6,548	2,158	5,081	38,268		
1996 <sup>3</sup> .....	36,488	1,417	3,368	7,509	8,714	2,512	6,024	1,961	4,983	40,289		
1997 <sup>3</sup> .....	34,806	1,327	3,263	7,011	8,516	2,398	5,591	1,894	4,806	42,349		
1998 <sup>3</sup> .....	33,417	1,268	3,044	6,811	8,153	2,237	5,212	1,867	4,825	44,083		

<sup>1</sup> Distribution by citizenship data were not requested before 1980.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

<sup>3</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 9. Full-time graduate students without U.S. citizenship or permanent resident status in science, engineering, and health fields in all institutions, by field: 1975-1998**

Year	Total, science and engineering	Sciences										
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences		
1975 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 .....	48,273	30,382	5,731	1,387	3,254	2,066	2,296	4,519	1,210			9,919
1981 .....	52,341	32,660	6,258	1,495	3,641	2,558	2,439	4,787	1,004			10,478
1982 .....	55,178	33,896	6,454	1,626	3,887	3,190	2,460	4,968	1,079			10,232
1983 .....	59,529	36,776	7,195	1,669	4,241	3,923	2,530	5,457	1,093			10,668
1984 <sup>2</sup> .....	61,099	37,879	7,560	1,570	4,537	4,454	2,488	5,740	1,045			10,485
1985 <sup>2</sup> .....	65,711	41,639	8,483	1,665	4,821	5,534	2,396	6,286	1,156			11,298
1986 <sup>2</sup> .....	72,379	45,443	9,498	1,867	5,145	6,108	2,598	7,146	1,170			11,911
1987 <sup>2</sup> .....	76,036	48,027	10,028	1,939	5,494	6,473	2,660	7,980	1,212			12,241
1988 .....	80,421	50,925	10,444	2,152	5,774	6,718	2,679	8,965	1,316			12,877
1989 .....	83,486	53,180	11,100	2,304	5,984	6,990	2,677	9,981	1,327			12,817
1990 .....	87,595	56,082	11,649	2,431	5,904	7,947	2,885	10,659	1,485			13,122
1991 .....	91,687	57,744	11,850	2,571	5,876	8,090	2,884	11,598	1,624			13,251
1992 <sup>3</sup> .....	93,037	58,509	11,914	2,677	5,740	8,634	2,862	11,831	1,614			13,237
1993 <sup>3</sup> .....	89,546	56,972	11,380	2,687	5,474	8,389	2,807	11,961	1,586			12,688
1994 <sup>3</sup> .....	86,197	55,798	10,913	2,862	5,350	7,943	2,812	11,789	1,858			12,271
1995 <sup>3</sup> .....	83,090	53,915	10,492	2,586	5,119	7,880	2,754	11,134	1,648			12,302
1996 <sup>3</sup> .....	83,411	54,048	10,317	2,396	5,081	8,799	2,573	10,515	1,623			12,744
1997 <sup>3</sup> .....	84,695	53,915	10,096	2,222	4,882	9,746	2,369	10,232	1,671			12,697
1998 <sup>3</sup> .....	87,110	54,778	9,940	2,187	4,692	10,696	2,239	10,479	1,745			12,800
		Engineering										
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering			Health fields
1975 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1976 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1977 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1978 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1979 <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1980 .....	17,891	568	1,990	3,288	4,297	1,439	2,630	1,107	2,572			2,033
1981 .....	19,681	601	2,202	3,637	4,785	1,574	3,059	1,112	2,711			2,135
1982 .....	21,282	577	2,341	3,953	5,112	1,617	3,500	1,181	3,001			2,289
1983 .....	22,753	752	2,239	4,260	5,867	1,355	4,003	1,174	3,103			2,398
1984 <sup>2</sup> .....	23,220	739	2,131	4,399	6,035	1,459	4,107	1,209	3,141			2,346
1985 <sup>2</sup> .....	24,072	736	2,209	4,467	6,662	1,582	4,017	1,288	3,111			2,533
1986 <sup>2</sup> .....	26,936	811	2,182	4,668	7,718	1,754	4,571	1,516	3,716			2,691
1987 <sup>2</sup> .....	28,009	813	2,321	4,538	8,099	2,011	4,671	1,607	3,949			2,758
1988 .....	29,496	1,031	2,402	4,738	8,411	2,068	5,117	1,661	4,068			3,052
1989 .....	30,306	1,015	2,614	4,867	8,743	2,232	4,860	1,830	4,145			3,286
1990 .....	31,513	1,140	2,775	4,753	9,023	2,396	5,086	1,945	4,395			3,556
1991 .....	33,943	1,124	2,990	5,188	9,928	2,838	5,567	1,991	4,317			3,761
1992 <sup>3</sup> .....	34,528	1,060	2,998	5,451	10,419	3,005	5,580	2,027	3,988			3,693
1993 <sup>3</sup> .....	32,574	1,084	2,934	5,018	9,942	2,693	5,167	1,985	3,751			3,817
1994 <sup>3</sup> .....	30,399	1,138	2,735	4,793	8,945	2,730	4,785	1,773	3,500			3,633
1995 <sup>3</sup> .....	29,175	1,082	2,653	4,596	8,805	2,479	4,580	1,722	3,258			3,627
1996 <sup>3</sup> .....	29,363	1,159	2,541	4,282	9,275	2,616	4,666	1,732	3,092			3,970
1997 <sup>3</sup> .....	30,780	1,202	2,521	4,257	10,411	2,677	4,841	1,767	3,104			3,992
1998 <sup>3</sup> .....	32,332	1,297	2,557	4,235	11,637	2,705	4,861	1,835	3,205			4,009

<sup>1</sup> Distribution by citizenship data were not requested before 1980.

<sup>2</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

<sup>3</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens.

**KEY:** N/A = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 10. Graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	471,262	493,632	504,449	504,542	499,732	494,219	487,371	485,754
Total, science and engineering fields .....	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Sciences, total .....	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Physical sciences, total .....	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Astronomy .....	829	869	880	973	912	874	778	820
Chemistry .....	19,407	19,929	20,131	19,797	19,594	19,358	18,794	18,454
Physics .....	14,081	14,122	13,841	13,162	12,425	11,728	11,147	10,809
Physical sciences, n.e.c. ....	393	428	466	517	486	395	389	482
Earth, atmos., & ocean sci., total .....	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Atmospheric sciences .....	968	1,089	1,112	1,109	1,072	1,086	1,092	965
Geosciences .....	7,567	7,744	7,785	7,741	7,608	7,323	6,997	6,705
Oceanography .....	2,386	2,530	2,611	2,853	2,703	2,598	2,458	2,545
Earth, atmos., & ocean sci., n.e.c. ....	3,559	3,984	4,297	4,339	4,422	4,273	4,097	4,149
Mathematical sciences, total .....	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Mathematics & applied mathematics .....	17,206	17,404	16,945	16,463	15,400	14,970	14,048	13,816
Statistics .....	2,746	2,951	3,055	3,116	3,109	3,045	2,681	2,647
Computer sciences .....	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Agricultural sciences .....	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Biological sciences, total .....	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Anatomy .....	1,051	1,030	1,027	1,079	1,056	1,111	1,094	1,015
Biochemistry .....	5,201	5,376	5,513	5,632	5,550	5,265	5,093	5,138
Biology .....	13,292	13,874	14,327	14,220	14,284	14,635	14,643	14,257
Biometry/epidemiology .....	2,032	2,365	2,658	2,710	2,812	3,001	2,900	3,484
Biophysics .....	697	751	780	794	845	833	748	737
Botany .....	2,694	2,689	2,714	2,748	2,609	2,504	2,402	2,328
Cell biology .....	2,809	3,093	3,374	3,768	3,890	3,896	3,981	4,079
Ecology .....	1,180	1,301	1,410	1,566	1,680	1,615	1,659	1,696
Entomology/parasitology .....	1,171	1,193	1,247	1,263	1,241	1,234	1,161	1,168
Genetics .....	1,520	1,639	1,785	1,699	1,700	1,729	1,760	1,705
Microbio., immunology, & virology .....	4,928	4,972	5,068	5,141	5,072	4,963	4,854	4,824
Nutrition .....	4,164	4,159	4,388	4,747	5,016	4,859	4,550	4,431
Pathology .....	1,449	1,456	1,575	1,707	1,670	1,656	1,674	1,580
Pharmacology .....	2,432	2,529	2,645	2,830	2,700	2,652	2,582	2,713
Physiology .....	2,332	2,317	2,372	2,378	2,540	2,377	2,298	2,169
Zoology .....	2,191	2,139	2,120	2,092	2,068	1,911	1,730	1,676
Biosciences, n.e.c. ....	2,635	3,294	3,449	3,769	4,003	3,887	4,006	4,060
Psychology, total .....	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Psychology, general .....	19,555	18,802	18,887	18,297	17,666	16,894	17,350	17,559
Clinical psychology .....	10,834	12,090	12,526	12,684	12,519	12,787	13,008	12,839
Psychology, n.e.c. ....	20,954	22,592	23,144	23,573	23,456	23,528	22,849	22,657
Social sciences, total .....	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Agricultural economics .....	2,364	2,522	2,415	2,289	2,338	2,117	2,043	1,995
Anthropology (cultural & social) .....	6,731	7,123	7,361	7,665	7,693	7,773	7,560	7,577
Economics (except agricultural) .....	12,707	13,252	13,214	12,913	12,673	12,080	11,097	10,699
Geography .....	3,760	4,102	4,378	4,502	4,371	4,331	4,287	4,325
History and philosophy of science .....	337	360	369	387	401	409	443	518
Linguistics .....	3,425	3,277	3,321	3,279	3,194	3,156	3,008	2,883
Political science .....	31,707	33,797	35,076	34,317	34,298	33,252	32,083	30,680
Sociology .....	8,393	9,011	9,425	9,498	9,564	9,425	9,413	9,098
Sociology/anthropology .....	899	979	935	987	941	923	948	857
Social sciences, n.e.c. ....	10,419	11,355	12,299	13,297	13,976	15,181	15,141	15,193
Engineering, total .....	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Aerospace engineering .....	4,120	4,036	3,940	3,715	3,343	3,208	3,083	3,137
Agricultural engineering .....	983	1,008	1,018	1,061	1,037	1,012	941	925
Biomedical engineering .....	2,239	2,537	2,675	2,750	2,732	2,732	2,847	2,905
Chemical engineering .....	7,127	7,397	7,516	7,608	7,424	7,373	7,247	7,060
Civil engineering .....	17,398	19,572	19,583	19,925	19,218	18,528	17,049	16,374
Electrical engineering .....	35,182	36,460	35,314	33,050	30,747	29,736	30,618	31,398
Engineering science .....	2,154	2,218	2,180	2,089	1,955	1,751	1,647	1,701
Industrial/manufacturing eng. ....	12,676	13,525	13,596	13,661	13,143	12,399	11,736	11,059
Mechanical engineering .....	17,730	18,637	18,477	17,761	16,363	15,509	15,045	14,696
Metallurgical/materials eng. ....	5,160	5,512	5,363	5,191	4,920	4,713	4,649	4,644
Mining engineering .....	489	437	427	424	373	371	348	304
Nuclear engineering .....	1,282	1,286	1,306	1,246	1,154	980	868	821
Petroleum engineering .....	705	737	725	624	610	562	561	571
Engineering, n.e.c. ....	6,331	4,673	4,738	3,918	4,180	4,349	4,394	4,692

See explanatory information, if any, and SOURCE at end of table.

**Table 10. Graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields .....	58,565	62,988	68,563	73,291	77,177	78,856	79,682	80,474
Medical fields, total .....	11,707	12,594	14,184	15,027	15,521	15,320	15,404	16,341
Anesthesiology .....	529	708	719	729	749	754	840	907
Cardiology .....	2	8	11	14	19	18	48	51
Oncology/cancer research .....	156	197	209	208	189	185	198	209
Endocrinology .....	66	71	63	63	53	46	43	58
Gastroenterology .....	0	0	1	0	0	0	3	6
Hematology .....	4	5	3	2	1	3	3	1
Neurology .....	1,003	1,149	1,311	1,455	1,554	1,632	1,696	1,765
Obstetrics and gynecology .....	10	3	3	4	6	4	18	13
Ophthalmology .....	32	27	19	32	30	33	33	38
Otorhinolaryngology .....	3	0	1	2	0	0	2	0
Pediatrics .....	153	154	196	261	238	275	342	314
Preventive medicine/community health .....	8,423	8,737	9,976	10,459	10,858	10,543	10,306	11,142
Psychiatry .....	104	147	172	225	249	218	228	136
Pulmonary disease .....	0	0	0	0	0	0	0	0
Radiology .....	233	252	287	320	314	285	267	249
Surgery .....	69	76	82	119	174	167	221	174
Clinical medicine, n.e.c. ....	920	1,060	1,131	1,134	1,087	1,157	1,156	1,278
Other health fields, total .....	46,858	50,394	54,379	58,264	61,656	63,536	64,278	64,133
Dental sciences .....	1,016	1,121	1,135	1,199	1,251	1,291	1,411	1,471
Nursing .....	22,012	23,213	24,781	26,997	28,405	27,388	26,861	25,499
Pharmaceutical sciences .....	2,968	2,804	2,871	2,901	2,948	2,975	3,050	3,407
Speech pathology/audiology .....	8,945	9,791	10,740	11,473	12,092	12,973	13,320	13,315
Veterinary sciences .....	894	942	877	875	929	946	1,175	1,192
Health related, n.e.c. ....	11,023	12,523	13,975	14,819	16,031	17,963	18,461	19,249

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 11. Male graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	284,898	294,234	294,502	288,373	279,406	271,738	264,528	261,240
Total, science and engineering fields .....	271,845	280,397	279,289	272,120	262,341	253,629	245,643	241,828
Sciences, total .....	173,984	179,595	180,123	177,146	173,156	168,658	163,336	160,615
Physical sciences, total .....	26,146	26,504	26,116	25,290	24,327	23,303	22,257	21,831
Astronomy .....	657	683	682	750	689	647	570	590
Chemistry .....	13,145	13,367	13,279	12,956	12,759	12,511	12,066	11,911
Physics .....	12,101	12,179	11,865	11,254	10,590	9,919	9,403	9,029
Physical sciences, n.e.c. ....	243	275	290	330	289	226	218	301
Earth, atmos., & ocean sci., total .....	10,025	10,489	10,745	10,689	10,336	9,786	9,187	8,733
Atmospheric sciences .....	778	848	887	867	835	852	829	731
Geosciences .....	5,559	5,667	5,675	5,506	5,310	4,991	4,686	4,379
Oceanography .....	1,540	1,571	1,607	1,746	1,609	1,539	1,415	1,393
Earth, atmos., & ocean sci., n.e.c. ....	2,148	2,403	2,576	2,570	2,582	2,404	2,257	2,230
Mathematical sciences .....	13,654	13,806	13,362	13,044	12,248	11,794	10,857	10,483
Computer sciences .....	26,340	27,838	27,767	26,043	25,306	25,802	26,123	27,206
Agricultural sciences .....	7,939	8,059	7,826	7,911	7,935	7,502	7,280	7,112
Biological sciences, total .....	27,643	28,702	29,399	29,988	29,890	29,360	28,513	28,003
Anatomy .....	550	537	534	554	549	586	580	551
Biochemistry .....	3,070	3,158	3,182	3,250	3,143	2,982	2,922	2,913
Biology .....	7,080	7,295	7,520	7,476	7,395	7,511	7,370	7,070
Biometry/epidemiology .....	920	1,037	1,132	1,124	1,139	1,227	1,119	1,343
Biophysics .....	515	549	554	576	604	589	532	528
Botany .....	1,627	1,635	1,620	1,584	1,465	1,394	1,283	1,210
Cell biology .....	1,528	1,687	1,802	2,038	2,097	2,071	2,091	2,091
Ecology .....	662	712	746	821	906	847	867	862
Entomology/parasitology .....	830	839	847	846	827	810	751	754
Genetics .....	761	797	853	787	818	828	801	735
Microbio., immunology, & virology .....	2,576	2,606	2,600	2,632	2,591	2,506	2,431	2,428
Nutrition .....	1,244	1,208	1,244	1,267	1,287	1,231	1,138	1,069
Pathology .....	825	809	834	925	890	847	842	776
Pharmacology .....	1,302	1,348	1,404	1,484	1,395	1,366	1,362	1,398
Physiology .....	1,366	1,366	1,389	1,392	1,482	1,396	1,364	1,275
Zoology .....	1,307	1,311	1,260	1,216	1,202	1,091	974	941
Biosciences, n.e.c. ....	1,480	1,808	1,878	2,016	2,100	2,078	2,086	2,059
Psychology .....	16,556	16,650	16,567	16,416	15,877	15,403	15,528	15,314
Social sciences, total .....	45,681	47,547	48,341	47,765	47,237	45,708	43,591	41,933
Agricultural economics .....	1,728	1,810	1,665	1,541	1,555	1,407	1,355	1,315
Anthropology (cultural & social) .....	2,778	2,876	2,969	3,072	3,140	3,087	3,059	3,021
Economics (except agricultural) .....	9,148	9,450	9,358	9,120	8,797	8,297	7,585	7,239
Geography .....	2,442	2,671	2,796	2,904	2,786	2,770	2,662	2,662
Linguistics .....	1,512	1,281	1,301	1,213	1,194	1,133	1,034	976
Political science .....	17,971	18,826	19,320	18,733	18,348	17,620	16,679	15,833
Sociology .....	3,781	3,861	3,857	3,758	3,781	3,640	3,591	3,366
Sociology/anthropology .....	410	445	423	396	387	382	377	335
Social sciences, other .....	5,911	6,327	6,652	7,028	7,249	7,372	7,249	7,186
Engineering, total .....	97,861	100,802	99,166	94,974	89,185	84,971	82,307	81,213
Aerospace engineering .....	3,793	3,688	3,583	3,357	2,992	2,856	2,712	2,755
Agricultural engineering .....	858	864	867	861	835	802	723	682
Biomedical engineering .....	1,651	1,920	1,977	2,053	2,006	1,999	2,021	2,035
Chemical engineering .....	5,870	6,003	6,017	6,082	5,863	5,731	5,538	5,339
Civil engineering .....	14,296	15,918	15,725	15,714	14,986	14,228	12,889	12,294
Electrical engineering .....	31,311	32,167	30,992	28,946	26,652	25,607	26,159	26,562
Engineering science .....	1,866	1,913	1,876	1,783	1,658	1,456	1,369	1,370
Industrial/manufacturing eng. ....	10,321	10,870	11,003	10,866	10,388	9,685	9,125	8,664
Mechanical engineering .....	16,219	16,939	16,703	15,938	14,686	13,873	13,266	12,934
Metallurgical/materials eng. ....	4,173	4,443	4,336	4,122	3,861	3,653	3,555	3,529
Nuclear engineering .....	1,105	1,100	1,121	1,093	1,009	827	725	687
Engineering, other .....	6,398	4,977	4,966	4,159	4,249	4,254	4,225	4,362
Total, health fields .....	13,053	13,837	15,213	16,253	17,065	18,109	18,885	19,412
Clinical fields .....	1,150	1,289	1,353	1,373	1,348	1,407	1,552	1,611
Dental sciences .....	717	772	786	819	819	831	881	919
Nursing .....	1,128	1,168	1,285	1,506	1,661	1,765	2,036	2,129
Pharmaceutical sciences .....	1,729	1,621	1,592	1,591	1,602	1,564	1,526	1,690
Preventive medicine/community health .....	3,265	3,334	3,892	4,108	4,198	4,249	4,100	4,069
Speech pathology/audiology .....	708	777	856	935	983	1,042	1,075	1,094
Veterinary sciences .....	528	536	470	467	490	505	586	564
Other health fields .....	3,828	4,340	4,979	5,454	5,964	6,746	7,129	7,336

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 12. Female graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	186,364	199,398	209,947	216,169	220,326	222,481	222,843	224,514
Total, science and engineering fields .....	140,852	150,247	156,597	159,131	160,214	161,734	162,046	163,452
Sciences, total .....	125,137	133,014	138,905	141,082	142,200	143,482	143,320	144,378
Physical sciences, total .....	8,564	8,844	9,202	9,159	9,090	9,052	8,851	8,734
Astronomy .....	172	186	198	223	223	227	208	230
Chemistry .....	6,262	6,562	6,852	6,841	6,835	6,847	6,728	6,543
Physics .....	1,980	1,943	1,976	1,908	1,835	1,809	1,744	1,780
Physical sciences, n.e.c. ....	150	153	176	187	197	169	171	181
Earth, atmos., & ocean sci., total .....	4,455	4,858	5,060	5,353	5,469	5,494	5,457	5,631
Atmospheric sciences .....	190	241	225	242	237	234	263	234
Geosciences .....	2,008	2,077	2,110	2,235	2,298	2,332	2,311	2,326
Oceanography .....	846	959	1,004	1,107	1,094	1,059	1,043	1,152
Earth, atmos., & ocean sci., n.e.c. ....	1,411	1,581	1,721	1,769	1,840	1,869	1,840	1,919
Mathematical sciences .....	6,298	6,549	6,638	6,535	6,261	6,221	5,872	5,980
Computer sciences .....	8,270	8,455	8,422	8,085	8,126	8,790	9,873	10,644
Agricultural sciences .....	3,567	3,768	4,088	4,288	4,432	4,412	4,534	4,699
Biological sciences, total .....	24,135	25,475	27,053	28,155	28,846	28,768	28,622	29,057
Anatomy .....	501	493	493	525	507	525	514	464
Biochemistry .....	2,131	2,218	2,331	2,382	2,407	2,283	2,171	2,225
Biology .....	6,212	6,579	6,807	6,744	6,889	7,124	7,273	7,187
Biometry/epidemiology .....	1,112	1,328	1,526	1,586	1,673	1,774	1,781	2,141
Biophysics .....	182	202	226	218	241	244	216	209
Botany .....	1,067	1,054	1,094	1,164	1,144	1,110	1,119	1,118
Cell biology .....	1,281	1,406	1,572	1,730	1,793	1,825	1,890	1,988
Ecology .....	518	589	664	745	774	768	792	834
Entomology/parasitology .....	341	354	400	417	414	424	410	414
Genetics .....	759	842	932	912	882	901	959	970
Microbio., immunology, & virology .....	2,352	2,366	2,468	2,509	2,481	2,457	2,423	2,396
Nutrition .....	2,920	2,951	3,144	3,480	3,729	3,628	3,412	3,362
Pathology .....	624	647	741	782	780	809	832	804
Pharmacology .....	1,130	1,181	1,241	1,346	1,305	1,286	1,220	1,315
Physiology .....	966	951	983	986	1,058	981	934	894
Zoology .....	884	828	860	876	866	820	756	735
Biosciences, n.e.c. ....	1,155	1,486	1,571	1,753	1,903	1,809	1,920	2,001
Psychology .....	34,787	36,834	37,990	38,138	37,764	37,806	37,679	37,741
Social sciences, total .....	35,061	38,231	40,452	41,369	42,212	42,939	42,432	41,892
Agricultural economics .....	636	712	750	748	783	710	688	680
Anthropology (cultural & social) .....	3,953	4,247	4,392	4,593	4,553	4,686	4,501	4,556
Economics (except agricultural) .....	3,559	3,802	3,856	3,793	3,876	3,783	3,512	3,460
Geography .....	1,318	1,431	1,582	1,598	1,585	1,561	1,625	1,663
Linguistics .....	1,913	1,996	2,020	2,066	2,000	2,023	1,974	1,907
Political science .....	13,736	14,971	15,756	15,584	15,950	15,632	15,404	14,847
Sociology .....	4,612	5,150	5,568	5,740	5,783	5,785	5,822	5,732
Sociology/anthropology .....	489	534	512	591	554	541	571	522
Social sciences, other .....	4,845	5,388	6,016	6,656	7,128	8,218	8,335	8,525
Engineering, total .....	15,715	17,233	17,692	18,049	18,014	18,252	18,726	19,074
Aerospace engineering .....	327	348	357	358	351	352	371	382
Agricultural engineering .....	125	144	151	200	202	210	218	243
Biomedical engineering .....	588	617	698	697	726	733	826	870
Chemical engineering .....	1,257	1,394	1,499	1,526	1,561	1,642	1,709	1,721
Civil engineering .....	3,102	3,654	3,858	4,211	4,232	4,300	4,160	4,080
Electrical engineering .....	3,871	4,293	4,322	4,104	4,095	4,129	4,459	4,836
Engineering science .....	288	305	304	306	297	295	278	331
Industrial/manufacturing eng. ....	2,355	2,655	2,593	2,795	2,755	2,714	2,611	2,395
Mechanical engineering .....	1,511	1,698	1,774	1,823	1,677	1,636	1,779	1,762
Metallurgical/materials eng. ....	987	1,069	1,027	1,069	1,059	1,060	1,094	1,115
Nuclear engineering .....	177	186	185	153	145	153	143	134
Engineering, other .....	1,127	870	924	807	914	1,028	1,078	1,205
Total, health fields .....	45,512	49,151	53,350	57,038	60,112	60,747	60,797	61,062
Clinical fields .....	1,131	1,419	1,544	1,740	1,761	1,738	1,850	1,823
Dental sciences .....	299	349	349	380	432	460	530	552
Nursing .....	20,884	22,045	23,496	25,491	26,744	25,623	24,825	23,370
Pharmaceutical sciences .....	1,239	1,183	1,279	1,310	1,346	1,411	1,524	1,717
Preventive medicine/community health .....	5,158	5,403	6,084	6,351	6,660	6,294	6,206	7,073
Speech pathology/audiology .....	8,237	9,014	9,884	10,538	11,109	11,931	12,245	12,221
Veterinary sciences .....	366	406	407	408	439	441	589	628
Other health fields .....	8,198	9,332	10,307	10,820	11,621	12,849	13,028	13,678

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all surveyed fields .....	471,262	493,632	504,449	504,542	499,732	494,219	487,371	485,754
Total U.S. citizens or permanent residents .....	358,073	379,704	394,115	397,984	396,838	391,228	383,510	378,705
Black, non-Hispanic .....	16,407	18,487	20,439	21,177	22,154	22,976	23,571	24,249
American Indian/Alaskan Native .....	1,365	1,515	1,606	1,725	1,857	1,907	1,969	2,050
Asian/Pacific Islander .....	20,059	23,966	26,849	29,616	29,361	29,943	30,328	31,709
Hispanic .....	13,053	14,625	16,052	15,967	17,264	17,834	18,151	18,879
White, non-Hispanic .....	288,813	302,169	309,257	311,987	304,438	297,159	286,560	279,041
Other or unknown .....	18,376	18,942	19,912	17,512	21,764	21,409	22,931	22,777
Students with temporary visas .....	113,189	113,928	110,334	106,558	102,894	102,991	103,861	107,049
Total, science and engineering .....	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Total U.S. citizens or permanent residents .....	304,063	321,182	330,169	329,095	324,017	317,209	308,725	303,304
Black, non-Hispanic .....	13,691	15,445	17,118	17,611	18,283	19,071	19,352	19,653
American Indian/Alaskan Native .....	1,120	1,243	1,309	1,383	1,516	1,539	1,600	1,614
Asian/Pacific Islander .....	18,136	21,752	24,059	26,474	25,901	25,947	25,973	26,844
Hispanic .....	11,045	12,246	13,381	13,281	14,117	14,638	15,004	15,595
White, non-Hispanic .....	243,602	253,435	256,859	255,719	245,889	238,077	227,992	220,700
Other or unknown .....	16,469	17,061	17,443	14,627	18,311	17,937	18,804	18,898
Students with temporary visas .....	108,634	109,462	105,717	102,156	98,538	98,154	98,964	101,976
Sciences, total .....	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Total U.S. citizens or permanent residents .....	231,830	244,587	252,578	253,056	252,285	249,015	244,162	241,062
Black, non-Hispanic .....	11,666	13,071	14,559	14,827	15,427	16,176	16,477	16,826
American Indian/Alaskan Native .....	935	1,066	1,098	1,141	1,285	1,305	1,361	1,377
Asian/Pacific Islander .....	11,020	13,260	15,072	16,697	16,893	17,510	17,872	18,784
Hispanic .....	8,921	9,783	10,687	10,420	11,309	11,703	12,193	12,683
White, non-Hispanic .....	188,818	196,039	199,419	199,699	193,933	188,965	181,931	176,709
Other or unknown .....	10,470	11,368	11,743	10,272	13,438	13,356	14,328	14,683
Students with temporary visas .....	67,291	68,022	66,450	65,172	63,071	63,125	62,494	63,931
Physical sciences .....	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Total U.S. citizens or permanent residents .....	21,985	22,543	23,066	22,740	21,992	21,159	20,194	19,812
Black, non-Hispanic .....	699	807	843	856	897	986	952	910
American Indian/Alaskan Native .....	62	67	81	67	76	60	70	64
Asian/Pacific Islander .....	1,429	1,615	1,973	1,923	1,780	1,743	1,638	1,760
Hispanic .....	649	680	747	675	732	743	784	831
White, non-Hispanic .....	18,402	18,527	18,582	18,422	17,487	16,762	15,749	15,197
Other or unknown .....	744	847	840	797	1,020	865	1,001	1,050
Students with temporary visas .....	12,725	12,805	12,252	11,709	11,425	11,196	10,914	10,753
Earth, atmospheric, & ocean sciences .....	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Total U.S. citizens or permanent residents .....	11,583	12,343	12,795	12,776	12,858	12,513	12,128	11,862
Black, non-Hispanic .....	141	202	227	203	219	223	206	206
American Indian/Alaskan Native .....	29	35	46	49	53	65	82	85
Asian/Pacific Islander .....	267	383	469	454	425	411	417	425
Hispanic .....	250	308	371	344	366	381	407	390
White, non-Hispanic .....	10,531	10,893	11,145	11,351	11,322	10,956	10,486	10,175
Other or unknown .....	365	522	537	375	473	477	530	581
Students with temporary visas .....	2,897	3,004	3,010	3,266	2,947	2,767	2,516	2,502
Mathematical sciences .....	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Total U.S. citizens or permanent residents .....	13,318	13,878	13,866	13,516	12,700	12,254	11,185	11,048
Black, non-Hispanic .....	524	579	710	673	689	711	657	613
American Indian/Alaskan Native .....	20	27	32	36	70	41	43	34
Asian/Pacific Islander .....	866	963	1,020	1,208	1,121	1,225	1,052	1,174
Hispanic .....	349	376	415	369	400	425	427	454
White, non-Hispanic .....	10,457	10,851	10,572	10,496	9,659	9,201	8,360	8,081
Other or unknown .....	1,102	1,082	1,117	734	761	651	646	692
Students with temporary visas .....	6,634	6,477	6,134	6,063	5,809	5,761	5,544	5,415
Computer sciences .....	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Total U.S. citizens or permanent residents .....	22,988	24,163	24,269	23,064	22,638	22,737	23,088	23,693
Black, non-Hispanic .....	1,093	1,108	1,168	1,182	1,155	1,278	1,302	1,352
American Indian/Alaskan Native .....	42	72	68	43	55	53	60	93
Asian/Pacific Islander .....	2,858	3,399	3,566	4,056	4,053	4,269	4,632	5,278
Hispanic .....	631	706	696	633	664	701	723	754
White, non-Hispanic .....	16,464	16,893	16,760	15,709	14,739	14,443	14,045	13,937
Other or unknown .....	1,900	1,985	2,011	1,441	1,972	1,993	2,326	2,279
Students with temporary visas .....	11,622	12,130	11,920	11,064	10,794	11,855	12,908	14,157

See explanatory information, if any, and SOURCE at end of table.

**Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Agricultural sciences .....	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Total U.S. citizens or permanent residents .....	8,298	8,649	8,778	9,060	9,270	8,966	9,089	9,217
Black, non-Hispanic .....	145	209	235	239	294	268	229	310
American Indian/Alaskan Native .....	31	39	34	37	59	49	62	69
Asian/Pacific Islander .....	225	215	264	276	274	281	302	304
Hispanic .....	279	279	308	263	288	367	400	383
White, non-Hispanic .....	7,481	7,679	7,731	7,972	7,978	7,732	7,749	7,857
Other or unknown .....	137	228	206	273	377	269	347	294
Students with temporary visas .....	3,208	3,178	3,136	3,139	3,097	2,948	2,725	2,594
Biological sciences .....	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Total U.S. citizens or permanent residents .....	39,282	41,358	43,525	45,314	46,528	46,638	45,971	45,628
Black, non-Hispanic .....	1,317	1,493	1,737	1,709	1,879	2,010	2,171	2,186
American Indian/Alaskan Native .....	129	141	157	183	205	200	198	192
Asian/Pacific Islander .....	2,346	2,822	3,456	3,953	4,299	4,464	4,480	4,426
Hispanic .....	1,374	1,459	1,649	1,651	1,823	1,847	1,983	2,057
White, non-Hispanic .....	33,058	34,229	35,094	36,389	36,509	36,327	35,041	34,553
Other or unknown .....	1,058	1,214	1,432	1,429	1,813	1,790	2,098	2,214
Students with temporary visas .....	12,496	12,819	12,927	12,829	12,208	11,490	11,164	11,432
Psychology .....	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Total U.S. citizens or permanent residents .....	49,355	51,551	52,676	52,211	51,554	51,236	51,198	50,861
Black, non-Hispanic .....	2,455	2,758	3,284	3,529	3,359	3,455	3,647	3,845
American Indian/Alaskan Native .....	252	290	289	317	330	359	341	315
Asian/Pacific Islander .....	1,040	1,278	1,470	1,583	1,598	1,776	1,909	2,038
Hispanic .....	2,365	2,371	2,562	2,485	2,799	3,002	3,098	3,315
White, non-Hispanic .....	40,990	42,426	42,662	42,062	40,146	39,327	38,724	37,886
Other or unknown .....	2,253	2,428	2,409	2,235	3,322	3,317	3,479	3,462
Students with temporary visas .....	1,988	1,933	1,881	2,343	2,087	1,973	2,009	2,194
Social sciences .....	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Total U.S. citizens or permanent residents .....	65,021	70,102	73,603	74,375	74,745	73,512	71,309	68,941
Black, non-Hispanic .....	5,292	5,915	6,355	6,436	6,935	7,245	7,313	7,404
American Indian/Alaskan Native .....	370	395	391	409	437	478	505	525
Asian/Pacific Islander .....	1,989	2,585	2,854	3,244	3,343	3,341	3,442	3,379
Hispanic .....	3,024	3,604	3,939	4,000	4,237	4,237	4,371	4,499
White, non-Hispanic .....	51,435	54,541	56,873	57,298	56,093	54,217	51,777	49,023
Other or unknown .....	2,911	3,062	3,191	2,988	3,700	3,994	3,901	4,111
Students with temporary visas .....	15,721	15,676	15,190	14,759	14,704	15,135	14,714	14,884
Engineering, total .....	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Total U.S. citizens or permanent residents .....	72,233	76,595	77,591	76,039	71,732	68,194	64,563	62,242
Black, non-Hispanic .....	2,025	2,374	2,559	2,784	2,856	2,895	2,875	2,827
American Indian/Alaskan Native .....	185	177	211	242	231	234	239	237
Asian/Pacific Islander .....	7,116	8,492	8,987	9,777	9,008	8,437	8,101	8,060
Hispanic .....	2,124	2,463	2,694	2,861	2,808	2,935	2,811	2,912
White, non-Hispanic .....	54,784	57,396	57,440	56,020	51,956	49,112	46,061	43,991
Other or unknown .....	5,999	5,693	5,700	4,355	4,873	4,581	4,476	4,215
Students with temporary visas .....	41,343	41,440	39,267	36,984	35,467	35,029	36,470	38,045
Chemical engineering .....	7,127	7,397	7,516	7,608	7,424	7,373	7,247	7,060
Total U.S. citizens or permanent residents .....	3,939	4,122	4,348	4,601	4,473	4,505	4,403	4,189
Black, non-Hispanic .....	119	144	159	157	174	189	170	185
American Indian/Alaskan Native .....	22	15	14	18	21	30	18	21
Asian/Pacific Islander .....	399	379	461	524	458	482	512	469
Hispanic .....	159	176	180	171	202	200	142	179
White, non-Hispanic .....	3,140	3,236	3,388	3,521	3,420	3,381	3,346	3,105
Other or unknown .....	100	172	146	210	198	223	215	230
Students with temporary visas .....	3,188	3,275	3,168	3,007	2,951	2,868	2,844	2,871
Civil engineering .....	17,398	19,572	19,583	19,925	19,218	18,528	17,049	16,374
Total U.S. citizens or permanent residents .....	10,854	12,734	13,299	13,967	13,559	13,263	12,015	11,462
Black, non-Hispanic .....	279	343	393	424	471	491	443	410
American Indian/Alaskan Native .....	34	31	43	38	42	48	58	43
Asian/Pacific Islander .....	837	1,043	1,167	1,339	1,322	1,254	1,047	1,094
Hispanic .....	383	478	550	551	593	712	693	722
White, non-Hispanic .....	8,684	10,196	10,415	11,029	10,434	9,983	9,147	8,584
Other or unknown .....	637	643	731	586	697	775	627	609
Students with temporary visas .....	6,544	6,838	6,284	5,958	5,659	5,265	5,034	4,912

See explanatory information, if any, and SOURCE at end of table.

**Table 13. Graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Electrical engineering .....	35,182	36,460	35,314	33,050	30,747	29,736	30,618	31,398
Total U.S. citizens or permanent residents .....	22,366	23,627	22,874	21,644	19,529	18,374	17,943	17,348
Black, non-Hispanic .....	669	771	863	861	821	775	869	868
American Indian/Alaskan Native .....	39	38	45	53	52	51	46	33
Asian/Pacific Islander .....	3,026	3,755	3,737	4,088	3,697	3,540	3,481	3,509
Hispanic .....	661	748	841	853	784	792	810	815
White, non-Hispanic .....	15,571	15,996	15,650	14,336	12,640	11,769	11,113	10,622
Other or unknown .....	2,400	2,319	1,738	1,453	1,535	1,447	1,624	1,501
Students with temporary visas .....	12,816	12,833	12,440	11,406	11,218	11,362	12,675	14,050
Industrial engineering .....	12,676	13,525	13,596	13,661	13,143	12,399	11,736	11,059
Total U.S. citizens or permanent residents .....	8,902	9,682	10,153	10,095	9,819	9,102	8,396	7,671
Black, non-Hispanic .....	384	444	440	507	527	521	478	455
American Indian/Alaskan Native .....	39	42	36	23	23	21	23	30
Asian/Pacific Islander .....	586	794	863	852	837	737	708	595
Hispanic .....	253	297	332	375	374	410	391	355
White, non-Hispanic .....	7,016	7,375	7,448	7,483	7,025	6,676	6,227	5,643
Other or unknown .....	624	730	1,034	855	1,033	737	569	593
Students with temporary visas .....	3,774	3,843	3,443	3,566	3,324	3,297	3,340	3,388
Mechanical engineering .....	17,730	18,637	18,477	17,761	16,363	15,509	15,045	14,696
Total U.S. citizens or permanent residents .....	11,056	11,875	12,199	11,940	10,905	10,026	9,351	9,046
Black, non-Hispanic .....	246	320	336	398	403	417	428	412
American Indian/Alaskan Native .....	21	24	30	54	44	35	35	25
Asian/Pacific Islander .....	985	1,179	1,307	1,421	1,225	1,073	947	973
Hispanic .....	338	394	382	453	422	383	360	389
White, non-Hispanic .....	8,416	9,035	9,029	8,893	8,059	7,461	6,979	6,636
Other or unknown .....	1,050	923	1,115	721	752	657	602	611
Students with temporary visas .....	6,674	6,762	6,278	5,821	5,458	5,483	5,694	5,650
Other engineering .....	23,463	22,444	22,372	21,018	20,304	19,678	19,338	19,700
Total U.S. citizens or permanent residents .....	15,116	14,555	14,718	13,792	13,447	12,924	12,455	12,526
Black, non-Hispanic .....	328	352	368	437	460	502	487	497
American Indian/Alaskan Native .....	30	27	43	56	49	49	59	85
Asian/Pacific Islander .....	1,283	1,342	1,452	1,553	1,469	1,351	1,406	1,420
Hispanic .....	330	370	409	458	433	438	415	452
White, non-Hispanic .....	11,957	11,558	11,510	10,758	10,378	9,842	9,249	9,401
Other or unknown .....	1,188	906	936	530	658	742	839	671
Students with temporary visas .....	8,347	7,889	7,654	7,226	6,857	6,754	6,883	7,174
Total, health fields .....	58,565	62,988	68,563	73,291	77,177	78,856	79,682	80,474
Total U.S. citizens or permanent residents .....	54,010	58,522	63,946	68,889	72,821	74,019	74,785	75,401
Black, non-Hispanic .....	2,716	3,042	3,321	3,566	3,871	3,905	4,219	4,596
American Indian/Alaskan Native .....	245	272	297	342	341	368	369	436
Asian/Pacific Islander .....	1,923	2,214	2,790	3,142	3,460	3,996	4,355	4,865
Hispanic .....	2,008	2,379	2,671	2,686	3,147	3,196	3,147	3,284
White, non-Hispanic .....	45,211	48,734	52,398	56,268	58,549	59,082	58,568	58,341
Other or unknown .....	1,907	1,881	2,469	2,885	3,453	3,472	4,127	3,879
Students with temporary visas .....	4,555	4,466	4,617	4,402	4,356	4,837	4,897	5,073

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 14. Graduate students in science, engineering, and health fields in all institutions, by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents : 1994-1998**

Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total enrollment								
Total, all surveyed fields:								
1994 .....	504,542	21,177	1,725	29,616	15,967	311,987	17,512	106,558
1995 .....	499,732	22,154	1,857	29,361	17,264	304,438	21,764	102,894
1996 .....	494,219	22,976	1,907	29,943	17,834	297,159	21,409	102,991
1997 .....	487,371	23,571	1,969	30,328	18,151	286,560	22,931	103,861
1998 .....	485,754	24,249	2,050	31,709	18,879	279,041	22,777	107,049
Total, science and engineering fields:								
1994 .....	431,251	17,611	1,383	26,474	13,281	255,719	14,627	102,156
1995 .....	422,555	18,283	1,516	25,901	14,117	245,889	18,311	98,538
1996 .....	415,363	19,071	1,539	25,947	14,638	238,077	17,937	98,154
1997 .....	407,689	19,352	1,600	25,973	15,004	227,992	18,804	98,964
1998 .....	405,280	19,653	1,614	26,844	15,595	220,700	18,898	101,976
Sciences, total:								
1994 .....	318,228	14,827	1,141	16,697	10,420	199,699	10,272	65,172
1995 .....	315,356	15,427	1,285	16,893	11,309	193,933	13,438	63,071
1996 .....	312,140	16,176	1,305	17,510	11,703	188,965	13,356	63,125
1997 .....	306,656	16,477	1,361	17,872	12,193	181,931	14,328	62,494
1998 .....	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
Physical sciences:								
1994 .....	34,449	856	67	1,923	675	18,422	797	11,709
1995 .....	33,417	897	76	1,780	732	17,487	1,020	11,425
1996 .....	32,355	986	60	1,743	743	16,762	865	11,196
1997 .....	31,108	952	70	1,638	784	15,749	1,001	10,914
1998 .....	30,565	910	64	1,760	831	15,197	1,050	10,753
Earth, atmospheric, & ocean sciences:								
1994 .....	16,042	203	49	454	344	11,351	375	3,266
1995 .....	15,805	219	53	425	366	11,322	473	2,947
1996 .....	15,280	223	65	411	381	10,956	477	2,767
1997 .....	14,644	206	82	417	407	10,486	530	2,516
1998 .....	14,364	206	85	425	390	10,175	581	2,502
Mathematical sciences:								
1994 .....	19,579	673	36	1,208	369	10,496	734	6,063
1995 .....	18,509	689	70	1,121	400	9,659	761	5,809
1996 .....	18,015	711	41	1,225	425	9,201	651	5,761
1997 .....	16,729	657	43	1,052	427	8,360	646	5,544
1998 .....	16,463	613	34	1,174	454	8,081	692	5,415
Computer sciences:								
1994 .....	34,128	1,182	43	4,056	633	15,709	1,441	11,064
1995 .....	33,432	1,155	55	4,053	664	14,739	1,972	10,794
1996 .....	34,592	1,278	53	4,269	701	14,443	1,993	11,855
1997 .....	35,996	1,302	60	4,632	723	14,045	2,326	12,908
1998 .....	37,850	1,352	93	5,278	754	13,937	2,279	14,157
Agricultural sciences:								
1994 .....	12,199	239	37	276	263	7,972	273	3,139
1995 .....	12,367	294	59	274	288	7,978	377	3,097
1996 .....	11,914	268	49	281	367	7,732	269	2,948
1997 .....	11,814	229	62	302	400	7,749	347	2,725
1998 .....	11,811	310	69	304	383	7,857	294	2,594
Biological sciences:								
1994 .....	58,143	1,709	183	3,953	1,651	36,389	1,429	12,829
1995 .....	58,736	1,879	205	4,299	1,823	36,509	1,813	12,208
1996 .....	58,128	2,010	200	4,464	1,847	36,327	1,790	11,490
1997 .....	57,135	2,171	198	4,480	1,983	35,041	2,098	11,164
1998 .....	57,060	2,186	192	4,426	2,057	34,553	2,214	11,432
Psychology:								
1994 .....	54,554	3,529	317	1,583	2,485	42,062	2,235	2,343
1995 .....	53,641	3,359	330	1,598	2,799	40,146	3,322	2,087
1996 .....	53,209	3,455	359	1,776	3,002	39,327	3,317	1,973
1997 .....	53,207	3,647	341	1,909	3,098	38,724	3,479	2,009
1998 .....	53,055	3,845	315	2,038	3,315	37,886	3,462	2,194

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions, by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents : 1994-1998**

Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total enrollment								
<b>Social sciences:</b>								
1994 .....	89,134	6,436	409	3,244	4,000	57,298	2,988	14,759
1995 .....	89,449	6,935	437	3,343	4,237	56,093	3,700	14,704
1996 .....	88,647	7,245	478	3,341	4,237	54,217	3,994	15,135
1997 .....	86,023	7,313	505	3,442	4,371	51,777	3,901	14,714
1998 .....	83,825	7,404	525	3,379	4,499	49,023	4,111	14,884
<b>Engineering:</b>								
1994 .....	113,023	2,784	242	9,777	2,861	56,020	4,355	36,984
1995 .....	107,199	2,856	231	9,008	2,808	51,956	4,873	35,467
1996 .....	103,223	2,895	234	8,437	2,935	49,112	4,581	35,029
1997 .....	101,033	2,875	239	8,101	2,811	46,061	4,476	36,470
1998 .....	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
<b>Health fields:</b>								
1994 .....	73,291	3,566	342	3,142	2,686	56,268	2,885	4,402
1995 .....	77,177	3,871	341	3,460	3,147	58,549	3,453	4,356
1996 .....	78,856	3,905	368	3,996	3,196	59,082	3,472	4,837
1997 .....	79,682	4,219	369	4,355	3,147	58,568	4,127	4,897
1998 .....	80,474	4,596	436	4,865	3,284	58,341	3,879	5,073
Men								
<b>Total, all surveyed fields:</b>								
1994 .....	288,373	8,669	771	18,187	7,836	164,645	9,868	78,397
1995 .....	279,406	8,934	834	17,487	8,188	157,487	12,022	74,454
1996 .....	271,738	8,974	863	17,274	8,474	151,294	11,353	73,506
1997 .....	264,528	9,121	890	17,097	8,526	143,766	11,991	73,137
1998 .....	261,240	9,262	898	17,658	8,786	138,238	11,940	74,458
<b>Total, science and engineering fields:</b>								
1994 .....	272,120	8,049	693	17,152	7,198	153,625	9,136	76,267
1995 .....	262,341	8,211	753	16,371	7,406	146,057	11,181	72,362
1996 .....	253,629	8,253	768	15,953	7,673	139,370	10,588	71,024
1997 .....	245,643	8,337	804	15,665	7,702	131,502	10,961	70,672
1998 .....	241,828	8,347	802	16,003	7,891	125,822	11,004	71,959
<b>Sciences, total:</b>								
1994 .....	177,146	6,082	514	9,190	4,917	106,833	5,483	44,127
1995 .....	173,156	6,254	571	9,143	5,210	102,983	7,069	41,926
1996 .....	168,658	6,301	577	9,297	5,407	98,885	6,785	41,406
1997 .....	163,336	6,377	624	9,346	5,531	93,719	7,349	40,390
1998 .....	160,615	6,406	628	9,821	5,669	89,942	7,546	40,603
<b>Physical sciences:</b>								
1994 .....	25,290	497	49	1,253	444	13,745	562	8,740
1995 .....	24,327	529	57	1,159	470	13,004	722	8,386
1996 .....	23,303	550	42	1,096	455	12,387	621	8,152
1997 .....	22,257	508	46	1,045	500	11,571	689	7,898
1998 .....	21,831	479	41	1,150	524	11,035	759	7,843
<b>Earth, atmospheric, &amp; ocean sciences:</b>								
1994 .....	10,689	118	26	297	214	7,403	242	2,389
1995 .....	10,336	117	32	264	224	7,247	302	2,150
1996 .....	9,786	116	36	250	233	6,865	292	1,994
1997 .....	9,187	105	47	253	240	6,413	332	1,797
1998 .....	8,733	105	45	238	209	6,063	334	1,739
<b>Mathematical sciences:</b>								
1994 .....	13,044	343	24	735	241	6,824	503	4,374
1995 .....	12,248	385	43	669	248	6,230	520	4,153
1996 .....	11,794	368	24	702	266	5,910	425	4,099
1997 .....	10,857	347	29	622	254	5,322	438	3,845
1998 .....	10,483	339	16	702	276	5,045	467	3,638
<b>Computer sciences:</b>								
1994 .....	26,043	696	36	2,695	473	12,442	1,053	8,648
1995 .....	25,306	652	40	2,715	502	11,664	1,535	8,198
1996 .....	25,802	718	39	2,836	524	11,412	1,481	8,792
1997 .....	26,123	767	43	2,988	514	10,908	1,681	9,222
1998 .....	27,206	768	68	3,387	560	10,787	1,633	10,003

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions, by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents : 1994-1998**

Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
<b>Men</b>								
<b>Agricultural sciences:</b>								
1994 .....	7,911	118	20	168	142	5,002	165	2,296
1995 .....	7,935	150	29	147	154	4,988	235	2,232
1996 .....	7,502	131	23	142	203	4,734	168	2,101
1997 .....	7,280	105	34	164	242	4,642	189	1,904
1998 .....	7,112	147	44	155	208	4,630	161	1,767
<b>Biological sciences:</b>								
1994 .....	29,988	671	77	2,022	769	18,470	714	7,265
1995 .....	29,890	691	87	2,165	854	18,393	963	6,737
1996 .....	29,360	725	93	2,257	852	18,290	943	6,200
1997 .....	28,513	783	91	2,170	900	17,497	1,058	6,014
1998 .....	28,003	791	88	2,094	932	17,022	1,128	5,948
<b>Psychology:</b>								
1994 .....	16,416	851	97	435	705	12,712	675	941
1995 .....	15,877	817	93	416	762	11,983	949	857
1996 .....	15,403	810	111	469	829	11,574	902	708
1997 .....	15,528	910	118	510	866	11,316	1,058	750
1998 .....	15,314	920	90	554	909	11,028	1,009	804
<b>Social sciences:</b>								
1994 .....	47,765	2,788	185	1,585	1,929	30,235	1,569	9,474
1995 .....	47,237	2,913	190	1,608	1,996	29,474	1,843	9,213
1996 .....	45,708	2,883	209	1,545	2,045	27,713	1,953	9,360
1997 .....	43,591	2,852	216	1,594	2,015	26,050	1,904	8,960
1998 .....	41,933	2,857	236	1,541	2,051	24,332	2,055	8,861
<b>Engineering:</b>								
1994 .....	94,974	1,967	179	7,962	2,281	46,792	3,653	32,140
1995 .....	89,185	1,957	182	7,228	2,196	43,074	4,112	30,436
1996 .....	84,971	1,952	191	6,656	2,266	40,485	3,803	29,618
1997 .....	82,307	1,960	180	6,319	2,171	37,783	3,612	30,282
1998 .....	81,213	1,941	174	6,182	2,222	35,880	3,458	31,356
<b>Health fields:</b>								
1994 .....	16,253	620	78	1,035	638	11,020	732	2,130
1995 .....	17,065	723	81	1,116	782	11,430	841	2,092
1996 .....	18,109	721	95	1,321	801	11,924	765	2,482
1997 .....	18,885	784	86	1,432	824	12,264	1,030	2,465
1998 .....	19,412	915	96	1,655	895	12,416	936	2,499
<b>Women</b>								
<b>Total, all surveyed fields:</b>								
1994 .....	216,169	12,508	954	11,429	8,131	147,342	7,644	28,161
1995 .....	220,326	13,220	1,023	11,874	9,076	146,951	9,742	28,440
1996 .....	222,481	14,002	1,044	12,669	9,360	145,865	10,056	29,485
1997 .....	222,843	14,450	1,079	13,231	9,625	142,794	10,940	30,724
1998 .....	224,514	14,987	1,152	14,051	10,093	140,803	10,837	32,591
<b>Total, science and engineering fields:</b>								
1994 .....	159,131	9,562	690	9,322	6,083	102,094	5,491	25,889
1995 .....	160,214	10,072	763	9,530	6,711	99,832	7,130	26,176
1996 .....	161,734	10,818	771	9,994	6,965	98,707	7,349	27,130
1997 .....	162,046	11,015	796	10,308	7,302	96,490	7,843	28,292
1998 .....	163,452	11,306	812	10,841	7,704	94,878	7,894	30,017
<b>Sciences, total:</b>								
1994 .....	141,082	8,745	627	7,507	5,503	92,866	4,789	21,045
1995 .....	142,200	9,173	714	7,750	6,099	90,950	6,369	21,145
1996 .....	143,482	9,875	728	8,213	6,296	90,080	6,571	21,719
1997 .....	143,320	10,100	737	8,526	6,662	88,212	6,979	22,104
1998 .....	144,378	10,420	749	8,963	7,014	86,767	7,137	23,328

See explanatory information, if any, and SOURCE at end of table.

**Table 14. Graduate students in science, engineering, and health fields in all institutions, by sex, field, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents : 1994-1998**

Sex, field, and year	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Women								
Physical sciences:								
1994 .....	9,159	359	18	670	231	4,677	235	2,969
1995 .....	9,090	368	19	621	262	4,483	298	3,039
1996 .....	9,052	436	18	647	288	4,375	244	3,044
1997 .....	8,851	444	24	593	284	4,178	312	3,016
1998 .....	8,734	431	23	610	307	4,162	291	2,910
Earth, atmospheric, & ocean sciences:								
1994 .....	5,353	85	23	157	130	3,948	133	877
1995 .....	5,469	102	21	161	142	4,075	171	797
1996 .....	5,494	107	29	161	148	4,091	185	773
1997 .....	5,457	101	35	164	167	4,073	198	719
1998 .....	5,631	101	40	187	181	4,112	247	763
Mathematical sciences:								
1994 .....	6,535	330	12	473	128	3,672	231	1,689
1995 .....	6,261	304	27	452	152	3,429	241	1,656
1996 .....	6,221	343	17	523	159	3,291	226	1,662
1997 .....	5,872	310	14	430	173	3,038	208	1,699
1998 .....	5,980	274	18	472	178	3,036	225	1,777
Computer sciences:								
1994 .....	8,085	486	7	1,361	160	3,267	388	2,416
1995 .....	8,126	503	15	1,338	162	3,075	437	2,596
1996 .....	8,790	560	14	1,433	177	3,031	512	3,063
1997 .....	9,873	535	17	1,644	209	3,137	645	3,686
1998 .....	10,644	584	25	1,891	194	3,150	646	4,154
Agricultural sciences:								
1994 .....	4,288	121	17	108	121	2,970	108	843
1995 .....	4,432	144	30	127	134	2,990	142	865
1996 .....	4,412	137	26	139	164	2,998	101	847
1997 .....	4,534	124	28	138	158	3,107	158	821
1998 .....	4,699	163	25	149	175	3,227	133	827
Biological sciences:								
1994 .....	28,155	1,038	106	1,931	882	17,919	715	5,564
1995 .....	28,846	1,188	118	2,134	969	18,116	850	5,471
1996 .....	28,768	1,285	107	2,207	995	18,037	847	5,290
1997 .....	28,622	1,388	107	2,310	1,083	17,544	1,040	5,150
1998 .....	29,057	1,395	104	2,332	1,125	17,531	1,086	5,484
Psychology:								
1994 .....	38,138	2,678	220	1,148	1,780	29,350	1,560	1,402
1995 .....	37,764	2,542	237	1,182	2,037	28,163	2,373	1,230
1996 .....	37,806	2,645	248	1,307	2,173	27,753	2,415	1,265
1997 .....	37,679	2,737	223	1,399	2,232	27,408	2,421	1,259
1998 .....	37,741	2,925	225	1,484	2,406	26,858	2,453	1,390
Social sciences:								
1994 .....	41,369	3,648	224	1,659	2,071	27,063	1,419	5,285
1995 .....	42,212	4,022	247	1,735	2,241	26,619	1,857	5,491
1996 .....	42,939	4,362	269	1,796	2,192	26,504	2,041	5,775
1997 .....	42,432	4,461	289	1,848	2,356	25,727	1,997	5,754
1998 .....	41,892	4,547	289	1,838	2,448	24,691	2,056	6,023
Engineering:								
1994 .....	18,049	817	63	1,815	580	9,228	702	4,844
1995 .....	18,014	899	49	1,780	612	8,882	761	5,031
1996 .....	18,252	943	43	1,781	669	8,627	778	5,411
1997 .....	18,726	915	59	1,782	640	8,278	864	6,188
1998 .....	19,074	886	63	1,878	690	8,111	757	6,689
Health fields:								
1994 .....	57,038	2,946	264	2,107	2,048	45,248	2,153	2,272
1995 .....	60,112	3,148	260	2,344	2,365	47,119	2,612	2,264
1996 .....	60,747	3,184	273	2,675	2,395	47,158	2,707	2,355
1997 .....	60,797	3,435	283	2,923	2,323	46,304	3,097	2,432
1998 .....	61,062	3,681	340	3,210	2,389	45,925	2,943	2,574

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 15. Graduate students in science, engineering, and health fields in public institutions,  
by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	330,251	345,759	353,017	353,662	350,331	345,756	340,462	338,812
Total, science and engineering fields .....	287,076	299,547	303,363	300,537	294,750	288,282	282,586	280,614
Sciences, total .....	207,826	216,723	221,017	220,739	218,844	215,375	211,456	209,901
Physical sciences, total .....	25,193	25,687	25,773	25,128	24,527	23,646	22,721	22,514
Astronomy .....	546	561	579	591	556	525	471	509
Chemistry .....	13,980	14,426	14,649	14,435	14,402	14,179	13,837	13,706
Physics .....	10,281	10,283	10,090	9,618	9,114	8,561	8,041	7,842
Physical sciences, n.e.c. ....	386	417	455	484	455	381	372	457
Earth, atmos., & ocean sci., total .....	11,928	12,683	13,077	13,189	13,255	12,885	12,425	12,155
Atmospheric sciences .....	948	1,064	1,094	1,090	1,047	1,066	1,068	942
Geosciences .....	6,207	6,356	6,384	6,327	6,279	6,063	5,802	5,519
Oceanography .....	1,953	2,076	2,134	2,294	2,263	2,184	2,067	2,162
Earth, atmos., & ocean sci., n.e.c. ....	2,820	3,187	3,465	3,478	3,666	3,572	3,488	3,532
Mathematical sciences .....	15,602	15,910	15,645	15,204	14,253	13,878	12,735	12,498
Computer sciences .....	20,867	21,547	21,535	20,560	20,532	20,848	22,200	23,231
Agricultural sciences .....	10,986	11,332	11,430	11,637	11,842	11,422	11,351	11,321
Biological sciences, total .....	37,951	39,748	41,403	42,529	42,486	42,006	41,117	41,143
Anatomy .....	765	742	760	805	779	793	778	701
Biochemistry .....	3,545	3,655	3,701	3,914	3,891	3,730	3,610	3,633
Biology .....	9,843	10,313	10,795	10,754	10,621	10,979	10,878	10,585
Biometry/epidemiology .....	1,226	1,562	1,728	1,732	1,724	1,777	1,734	2,138
Biophysics .....	387	417	426	415	472	459	419	417
Botany .....	2,522	2,559	2,573	2,626	2,469	2,367	2,258	2,189
Cell biology .....	1,587	1,824	2,089	2,285	2,358	2,371	2,359	2,523
Ecology .....	1,032	1,123	1,234	1,387	1,490	1,450	1,513	1,552
Entomology/parasitology .....	1,102	1,127	1,186	1,193	1,179	1,171	1,101	1,109
Genetics .....	1,058	1,133	1,147	1,083	1,077	1,119	1,144	1,075
Microbio., immunology, & virology .....	3,570	3,556	3,582	3,617	3,554	3,451	3,366	3,309
Nutrition .....	3,464	3,450	3,523	3,731	3,884	3,786	3,632	3,621
Pathology .....	1,016	1,007	1,012	1,079	1,056	1,059	1,063	1,074
Pharmacology .....	1,672	1,757	1,871	1,979	1,872	1,797	1,750	1,829
Physiology .....	1,530	1,526	1,559	1,521	1,548	1,439	1,373	1,359
Zoology .....	2,036	1,997	1,976	1,951	1,914	1,780	1,598	1,558
Biosciences, n.e.c. ....	1,596	2,000	2,241	2,457	2,598	2,478	2,541	2,471
Psychology .....	28,483	29,642	29,574	29,503	29,197	28,290	28,578	28,420
Social sciences, total .....	56,816	60,174	62,580	62,989	62,752	62,400	60,329	58,619
Agricultural economics .....	2,249	2,404	2,303	2,174	2,205	2,031	1,973	1,928
Anthropology (cultural & social) .....	4,965	5,205	5,457	5,646	5,602	5,678	5,494	5,514
Economics (except agricultural) .....	8,375	8,747	8,768	8,598	8,355	7,953	7,253	6,894
Geography .....	3,561	3,799	4,052	4,168	4,077	4,013	3,994	4,017
Linguistics .....	2,382	2,442	2,486	2,419	2,383	2,281	2,168	2,097
Political science .....	20,757	21,871	22,625	21,983	21,869	21,115	20,340	19,285
Sociology .....	6,481	6,880	7,167	7,243	7,271	7,220	7,210	7,106
Sociology/anthropology .....	615	690	738	796	749	737	779	693
Social sciences, other .....	7,431	8,136	8,984	9,962	10,241	11,372	11,118	11,085
Engineering, total .....	79,250	82,824	82,346	79,798	75,906	72,907	71,130	70,713
Aerospace engineering .....	3,241	3,199	3,126	2,917	2,598	2,435	2,332	2,311
Agricultural engineering .....	943	967	970	1,006	981	959	893	880
Biomedical engineering .....	1,317	1,535	1,639	1,641	1,656	1,700	1,844	1,842
Chemical engineering .....	5,166	5,413	5,532	5,592	5,440	5,348	5,173	5,056
Civil engineering .....	13,136	14,752	14,743	14,948	14,534	14,091	13,056	12,508
Electrical engineering .....	22,475	23,610	23,066	21,943	20,636	19,523	20,126	20,412
Engineering science .....	1,367	1,470	1,432	1,368	1,294	1,252	1,122	1,069
Industrial/manufacturing eng. ....	8,390	9,095	9,228	9,193	8,593	8,105	7,591	7,558
Mechanical engineering .....	12,769	13,656	13,489	12,992	12,144	11,595	11,166	11,117
Metallurgical/materials eng. ....	3,461	3,769	3,741	3,667	3,454	3,313	3,269	3,218
Nuclear engineering .....	1,093	1,081	1,094	1,062	975	826	751	715
Engineering, other .....	5,892	4,277	4,286	3,469	3,601	3,760	3,807	4,027
Total, health fields .....	43,175	46,212	49,654	53,125	55,581	57,474	57,876	58,198
Clinical fields .....	1,385	1,620	1,670	1,845	1,832	1,952	2,037	2,032
Dental sciences .....	791	840	862	919	925	992	1,090	1,170
Nursing .....	16,709	17,689	19,094	21,232	22,116	21,505	21,139	20,352
Pharmaceutical sciences .....	2,243	2,258	2,349	2,335	2,385	2,429	2,488	2,710
Preventive medicine/community health .....	5,927	6,079	6,860	6,929	7,254	7,135	6,902	7,285
Speech pathology/audiology .....	7,635	8,227	8,800	9,423	9,918	10,778	11,063	10,887
Veterinary sciences .....	821	880	802	807	875	894	1,123	1,139
Other health fields .....	7,664	8,619	9,217	9,635	10,276	11,789	12,034	12,623

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 16. Graduate students in science, engineering, and health fields in private institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	141,011	147,873	151,432	150,880	149,401	148,463	146,909	146,942
Total, science and engineering fields .....	125,621	131,097	132,523	130,714	127,805	127,081	125,103	124,666
Sciences, total .....	91,295	95,886	98,011	97,489	96,512	96,765	95,200	95,092
Physical sciences, total .....	9,517	9,661	9,545	9,321	8,890	8,709	8,387	8,051
Astronomy .....	283	308	301	382	356	349	307	311
Chemistry .....	5,427	5,503	5,482	5,362	5,192	5,179	4,957	4,748
Physics .....	3,800	3,839	3,751	3,544	3,311	3,167	3,106	2,967
Physical sciences, n.e.c. ....	7	11	11	33	31	14	17	25
Earth, atmos., & ocean sci., total .....	2,552	2,664	2,728	2,853	2,550	2,395	2,219	2,209
Atmospheric sciences .....	20	25	18	19	25	20	24	23
Geosciences .....	1,360	1,388	1,401	1,414	1,329	1,260	1,195	1,186
Oceanography .....	433	454	477	559	440	414	391	383
Earth, atmos., & ocean sci., n.e.c. ....	739	797	832	861	756	701	609	617
Mathematical sciences .....	4,350	4,445	4,355	4,375	4,256	4,137	3,994	3,965
Computer sciences .....	13,743	14,746	14,654	13,568	12,900	13,744	13,796	14,619
Agricultural sciences .....	520	495	484	562	525	492	463	490
Biological sciences, total .....	13,827	14,429	15,049	15,614	16,250	16,122	16,018	15,917
Anatomy .....	286	288	267	274	277	318	316	314
Biochemistry .....	1,656	1,721	1,812	1,718	1,659	1,535	1,483	1,505
Biology .....	3,449	3,561	3,532	3,466	3,663	3,656	3,765	3,672
Biometry/epidemiology .....	806	803	930	978	1,088	1,224	1,166	1,346
Biophysics .....	310	334	354	379	373	374	329	320
Botany .....	172	130	141	122	140	137	144	139
Cell biology .....	1,222	1,269	1,285	1,483	1,532	1,525	1,622	1,556
Ecology .....	148	178	176	179	190	165	146	144
Entomology/parasitology .....	69	66	61	70	62	63	60	59
Genetics .....	462	506	638	616	623	610	616	630
Microbio., immunology, & virology .....	1,358	1,416	1,486	1,524	1,518	1,512	1,488	1,515
Nutrition .....	700	709	865	1,016	1,132	1,073	918	810
Pathology .....	433	449	563	628	614	597	611	506
Pharmacology .....	760	772	774	851	828	855	832	884
Physiology .....	802	791	813	857	992	938	925	810
Zoology .....	155	142	144	141	154	131	132	118
Biosciences, n.e.c. ....	1,039	1,294	1,208	1,312	1,405	1,409	1,465	1,589
Psychology .....	22,860	23,842	24,983	25,051	24,444	24,919	24,629	24,635
Social sciences, total .....	23,926	25,604	26,213	26,145	26,697	26,247	25,694	25,206
Agricultural economics .....	115	118	112	115	133	86	70	67
Anthropology (cultural & social) .....	1,766	1,918	1,904	2,019	2,091	2,095	2,066	2,063
Economics (except agricultural) .....	4,332	4,505	4,446	4,315	4,318	4,127	3,844	3,805
Geography .....	199	303	326	334	294	318	293	308
Linguistics .....	1,043	835	835	860	811	875	840	786
Political science .....	10,950	11,926	12,451	12,334	12,429	12,137	11,743	11,395
Sociology .....	1,912	2,131	2,258	2,255	2,293	2,205	2,203	1,992
Sociology/anthropology .....	284	289	197	191	192	186	169	164
Social sciences, other .....	3,325	3,579	3,684	3,722	4,136	4,218	4,466	4,626
Engineering, total .....	34,326	35,211	34,512	33,225	31,293	30,316	29,903	29,574
Aerospace engineering .....	879	837	814	798	745	773	751	826
Agricultural engineering .....	40	41	48	55	56	53	48	45
Biomedical engineering .....	922	1,002	1,036	1,109	1,076	1,032	1,003	1,063
Chemical engineering .....	1,961	1,984	1,984	2,016	1,984	2,025	2,074	2,004
Civil engineering .....	4,262	4,820	4,840	4,977	4,684	4,437	3,993	3,866
Electrical engineering .....	12,707	12,850	12,248	11,107	10,111	10,213	10,492	10,986
Engineering science .....	787	748	748	721	661	499	525	632
Industrial/manufacturing eng. ....	4,286	4,430	4,368	4,468	4,550	4,294	4,145	3,501
Mechanical engineering .....	4,961	4,981	4,988	4,769	4,219	3,914	3,879	3,579
Metallurgical/materials eng. ....	1,699	1,743	1,622	1,524	1,466	1,400	1,380	1,426
Nuclear engineering .....	189	205	212	184	179	154	117	106
Engineering, other .....	1,633	1,570	1,604	1,497	1,562	1,522	1,496	1,540
Total, health fields .....	15,390	16,776	18,909	20,166	21,596	21,382	21,806	22,276
Clinical fields .....	896	1,088	1,227	1,268	1,277	1,193	1,365	1,402
Dental sciences .....	225	281	273	280	326	299	321	301
Nursing .....	5,303	5,524	5,687	5,765	6,289	5,883	5,722	5,147
Pharmaceutical sciences .....	725	546	522	566	563	546	562	697
Preventive medicine/community health .....	2,496	2,658	3,116	3,530	3,604	3,408	3,404	3,857
Speech pathology/audiology .....	1,310	1,564	1,940	2,050	2,174	2,195	2,257	2,428
Veterinary sciences .....	73	62	75	68	54	52	52	53
Other health fields .....	4,362	5,053	6,069	6,639	7,309	7,806	8,123	8,391

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 17. Graduate students in science and engineering fields in all institutions,  
by field and Carnegie classification: 1991-1998**

Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
All institutions:								
Total, science and engineering fields .....	412,697	430,644	435,886	431,251	422,555	415,363	407,689	405,280
Sciences, total .....	299,121	312,609	319,028	318,228	315,356	312,140	306,656	304,993
Physical sciences .....	34,710	35,348	35,318	34,449	33,417	32,355	31,108	30,565
Earth, atmospheric, & ocean sciences .....	14,480	15,347	15,805	16,042	15,805	15,280	14,644	14,364
Mathematical sciences .....	19,952	20,355	20,000	19,579	18,509	18,015	16,729	16,463
Computer sciences .....	34,610	36,293	36,189	34,128	33,432	34,592	35,996	37,850
Agricultural sciences .....	11,506	11,827	11,914	12,199	12,367	11,914	11,814	11,811
Biological sciences .....	51,778	54,177	56,452	58,143	58,736	58,128	57,135	57,060
Psychology .....	51,343	53,484	54,557	54,554	53,641	53,209	53,207	53,055
Social sciences .....	80,742	85,778	88,793	89,134	89,449	88,647	86,023	83,825
Engineering, total .....	113,576	118,035	116,858	113,023	107,199	103,223	101,033	100,287
Research I:								
Total, science and engineering fields .....	209,217	216,974	219,205	217,275	212,830	207,941	201,719	199,438
Sciences, total .....	145,143	150,316	152,783	152,724	150,937	148,534	143,644	141,832
Physical sciences .....	21,962	22,333	22,255	21,758	21,039	20,267	19,539	19,138
Earth, atmospheric, & ocean sciences .....	7,769	8,035	8,208	8,233	8,090	7,784	7,400	7,227
Mathematical sciences .....	10,205	10,496	10,293	10,129	9,809	9,505	8,855	8,605
Computer sciences .....	11,101	11,304	11,497	11,233	11,151	11,401	11,563	12,140
Agricultural sciences .....	7,767	7,796	7,892	8,058	8,110	7,907	7,716	7,450
Biological sciences .....	31,447	32,720	33,798	34,675	34,596	34,171	33,360	33,638
Psychology .....	12,094	12,378	12,420	12,338	12,227	12,110	11,889	11,874
Social sciences .....	42,798	45,254	46,420	46,300	45,915	45,389	43,322	41,760
Engineering, total .....	64,074	66,658	66,422	64,551	61,893	59,407	58,075	57,606
Research II:								
Total, science and engineering fields .....	48,917	51,587	51,706	50,317	48,733	47,361	45,928	45,884
Sciences, total .....	33,200	35,201	35,510	34,978	34,410	33,829	32,496	32,582
Physical sciences .....	4,382	4,509	4,469	4,328	4,165	4,021	3,899	3,773
Earth, atmospheric, & ocean sciences .....	1,901	1,998	2,013	2,051	2,001	1,892	1,827	1,760
Mathematical sciences .....	2,669	2,641	2,507	2,414	2,230	2,101	1,900	1,849
Computer sciences .....	2,983	3,607	3,612	3,420	3,278	3,540	2,942	3,143
Agricultural sciences .....	2,004	2,194	2,184	2,209	2,292	2,090	2,122	2,249
Biological sciences .....	5,413	5,520	5,628	5,793	5,821	5,658	5,710	5,650
Psychology .....	4,451	4,739	4,631	4,506	4,545	4,348	4,212	4,295
Social sciences .....	9,397	9,993	10,466	10,257	10,078	10,179	9,884	9,863
Engineering, total .....	15,717	16,386	16,196	15,339	14,323	13,532	13,432	13,302
Doctorate-granting:								
Total, science and engineering fields .....	76,192	79,641	81,368	81,696	78,947	79,304	79,411	78,624
Sciences, total .....	57,290	60,427	62,148	62,776	61,541	61,696	62,068	61,422
Physical sciences .....	5,578	5,762	5,701	5,565	5,473	5,480	5,192	5,188
Earth, atmospheric, & ocean sciences .....	2,693	2,872	2,942	3,059	3,031	2,934	2,664	2,715
Mathematical sciences .....	3,795	3,937	3,877	3,858	3,522	3,481	3,257	3,203
Computer sciences .....	10,632	10,987	11,251	10,852	10,516	10,911	11,915	11,869
Agricultural sciences .....	675	778	750	898	882	864	766	865
Biological sciences .....	6,100	6,495	6,688	6,912	6,987	7,150	7,107	6,880
Psychology .....	13,082	13,706	13,930	14,211	13,691	13,298	13,968	13,781
Social sciences .....	14,735	15,890	17,009	17,421	17,439	17,578	17,199	16,921
Engineering, total .....	18,902	19,214	19,220	18,920	17,406	17,608	17,343	17,202

See explanatory information, if any, and SOURCE at end of table.

**Table 17. Graduate students in science and engineering fields in all institutions,  
by field and Carnegie classification: 1991-1998**

Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
Comprehensive:								
Total, science and engineering fields .....	61,690	65,231	66,228	64,482	64,240	63,178	63,080	63,353
Sciences, total .....	50,327	53,004	54,556	53,508	53,752	53,262	53,606	53,840
Physical sciences .....	2,445	2,399	2,521	2,419	2,391	2,245	2,130	2,141
Earth, atmospheric, & ocean sciences .....	1,569	1,805	2,016	2,078	2,105	2,065	2,193	2,114
Mathematical sciences .....	3,036	3,023	3,068	2,952	2,750	2,684	2,496	2,589
Computer sciences .....	8,838	9,296	8,725	7,616	7,432	7,793	8,662	9,581
Agricultural sciences .....	965	973	1,017	966	1,022	1,006	1,171	1,219
Biological sciences .....	4,952	5,304	5,920	5,976	6,356	6,183	6,084	5,974
Psychology .....	15,311	16,238	17,066	17,153	16,915	16,977	16,509	16,309
Social sciences .....	13,211	13,966	14,223	14,348	14,781	14,309	14,361	13,913
Engineering, total .....	11,363	12,227	11,672	10,974	10,488	9,916	9,474	9,513
Engineering:								
Total, science and engineering fields .....	2,026	2,178	2,196	2,230	2,337	2,137	2,201	2,107
Sciences, total .....	569	615	633	586	578	540	538	533
Physical sciences .....	113	118	123	111	106	105	101	93
Earth, atmospheric, & ocean sciences .....	164	180	194	181	166	160	166	176
Mathematical sciences .....	17	14	18	11	8	9	4	8
Computer sciences .....	267	293	292	275	284	250	256	253
Agricultural sciences .....	0	0	0	0	1	0	0	0
Biological sciences .....	8	10	6	8	13	16	11	3
Psychology .....	0	0	0	0	0	0	0	0
Social sciences .....	0	0	0	0	0	0	0	0
Engineering, total .....	1,457	1,563	1,563	1,644	1,759	1,597	1,663	1,574
Liberal arts:								
Total, science and engineering fields .....	2,326	2,409	2,305	2,307	2,151	2,038	1,889	1,635
Sciences, total .....	2,102	2,173	2,097	2,126	1,986	1,893	1,769	1,566
Physical sciences .....	117	119	115	110	102	101	109	95
Earth, atmospheric, & ocean sciences .....	144	162	157	160	143	142	155	149
Mathematical sciences .....	33	36	36	37	30	30	21	23
Computer sciences .....	56	55	39	26	23	23	18	13
Agricultural sciences .....	95	86	71	68	60	47	39	28
Biological sciences .....	133	133	135	135	128	133	129	121
Psychology .....	1,422	1,442	1,417	1,450	1,382	1,298	1,198	1,059
Social sciences .....	102	140	127	140	118	119	100	78
Engineering, total .....	224	236	208	181	165	145	120	69
Other:								
Total, science and engineering fields .....	12,329	12,624	12,878	12,944	13,317	13,404	13,461	14,239
Sciences, total .....	10,490	10,873	11,301	11,530	12,152	12,386	12,535	13,218
Physical sciences .....	113	108	134	158	141	136	138	137
Earth, atmospheric, & ocean sciences .....	240	295	275	280	269	303	239	223
Mathematical sciences .....	197	208	201	178	160	205	196	186
Computer sciences .....	733	751	773	706	748	674	640	851
Agricultural sciences .....	0	0	0	0	0	0	0	0
Biological sciences .....	3,725	3,995	4,277	4,644	4,835	4,817	4,734	4,794
Psychology .....	4,983	4,981	5,093	4,896	4,881	5,178	5,431	5,737
Social sciences .....	499	535	548	668	1,118	1,073	1,157	1,290
Engineering, total .....	1,839	1,751	1,577	1,414	1,165	1,018	926	1,021

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 18. Full-time graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Total, science and engineering fields .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Sciences, total .....	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Physical sciences, total .....	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Astronomy .....	810	840	848	953	871	854	768	787
Chemistry .....	16,731	16,999	17,204	17,104	16,762	16,506	16,019	15,774
Physics .....	12,442	12,689	12,397	11,766	11,052	10,400	9,923	9,661
Physical sciences, n.e.c. ....	134	145	162	220	217	196	182	178
Earth, atmos., & ocean sci., total .....	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Atmospheric sciences .....	859	959	980	993	959	980	966	856
Geosciences .....	5,688	5,885	5,970	5,946	5,796	5,579	5,432	5,214
Oceanography .....	1,991	2,133	2,177	2,333	2,228	2,074	1,971	2,047
Earth, atmos., & ocean sci., n.e.c. ....	1,835	2,009	2,240	2,198	2,292	2,193	2,181	2,372
Mathematical sciences .....	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Computer sciences .....	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Agricultural sciences .....	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Biological sciences, total .....	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Anatomy .....	961	960	977	983	978	1,042	1,033	961
Biochemistry .....	4,954	5,045	5,174	5,222	5,203	4,971	4,805	4,872
Biology .....	9,439	9,678	10,028	10,086	9,973	10,043	10,299	10,004
Biometry/epidemiology .....	1,431	1,634	1,990	2,056	2,093	2,162	2,005	2,559
Biophysics .....	679	728	755	770	800	807	728	707
Botany .....	2,304	2,301	2,353	2,349	2,149	2,130	2,051	1,993
Cell biology .....	2,716	2,961	3,189	3,596	3,694	3,670	3,663	3,757
Ecology .....	919	997	1,057	1,203	1,304	1,243	1,200	1,230
Entomology/parasitology .....	1,014	1,016	1,039	1,066	1,041	1,027	995	1,000
Genetics .....	1,412	1,526	1,690	1,602	1,619	1,653	1,666	1,621
Microbio., immunology, & virology .....	4,408	4,460	4,607	4,705	4,673	4,537	4,416	4,410
Nutrition .....	2,878	2,863	3,045	3,221	3,431	3,482	3,289	3,177
Pathology .....	1,113	1,165	1,296	1,389	1,382	1,355	1,420	1,339
Pharmacology .....	2,304	2,397	2,500	2,672	2,529	2,499	2,446	2,545
Physiology .....	2,163	2,160	2,220	2,221	2,376	2,217	2,102	1,990
Zoology .....	1,782	1,789	1,747	1,717	1,746	1,628	1,520	1,424
Biosciences, n.e.c. ....	2,223	2,709	2,814	3,159	3,339	3,278	3,359	3,419
Psychology .....	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Social sciences, total .....	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Agricultural economics .....	2,011	2,105	1,963	1,936	1,977	1,784	1,718	1,670
Anthropology (cultural & social) .....	5,079	5,337	5,429	5,837	5,792	6,003	5,799	5,734
Economics (except agricultural) .....	9,850	10,184	10,107	9,945	9,743	9,548	8,813	8,594
Geography .....	2,539	2,801	3,026	3,119	2,962	2,959	2,967	2,907
Linguistics .....	2,549	2,477	2,538	2,518	2,486	2,530	2,360	2,234
Political science .....	16,083	17,667	18,372	17,918	17,630	17,669	17,071	16,244
Sociology .....	5,949	6,469	6,625	6,720	6,692	6,610	6,717	6,500
Sociology/anthropology .....	624	651	639	693	663	620	666	615
Social sciences, other .....	5,947	6,566	6,921	7,586	8,285	9,189	9,377	9,272
Engineering, total .....	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Aerospace engineering .....	3,325	3,306	3,262	3,000	2,693	2,576	2,529	2,565
Agricultural engineering .....	823	840	835	879	859	799	748	756
Biomedical engineering .....	1,925	2,167	2,269	2,292	2,315	2,316	2,462	2,513
Chemical engineering .....	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Civil engineering .....	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Electrical engineering .....	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Engineering science .....	1,364	1,415	1,397	1,347	1,243	1,057	1,018	1,114
Industrial/manufacturing eng. ....	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Mechanical engineering .....	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Metallurgical/materials eng. ....	4,058	4,274	4,249	4,108	3,880	3,693	3,661	3,702
Nuclear engineering .....	1,080	1,084	1,070	997	883	771	708	662
Engineering, other .....	4,154	3,480	3,549	3,000	3,039	3,132	2,974	2,985
Total, health fields .....	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Clinical fields .....	1,811	2,038	2,217	2,374	2,347	2,395	2,765	2,662
Dental sciences .....	875	988	1,005	1,048	1,096	1,116	1,235	1,283
Nursing .....	6,475	6,422	6,875	7,914	8,561	8,653	9,035	9,028
Pharmaceutical sciences .....	2,198	2,074	2,133	2,188	2,152	2,226	2,240	2,320
Preventive medicine/community health .....	4,419	4,789	5,334	5,425	5,904	5,782	5,736	6,508
Speech pathology/audiology .....	6,499	7,144	8,109	8,707	9,064	9,649	9,907	10,141
Veterinary sciences .....	717	754	693	696	733	736	985	970
Other health fields .....	6,872	7,890	9,283	10,729	12,038	13,702	14,438	15,180

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 19. Male full-time graduate students in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	193,540	200,824	200,790	197,428	191,201	187,133	183,306	181,205
Total, science and engineering fields .....	185,090	191,791	190,864	186,675	179,834	174,783	170,168	167,620
Sciences, total .....	123,739	128,029	128,266	126,686	123,556	120,758	117,094	114,843
Physical sciences, total .....	22,845	23,173	22,888	22,277	21,238	20,413	19,458	19,050
Astronomy .....	641	659	658	732	657	630	564	566
Chemistry .....	11,404	11,482	11,465	11,309	11,022	10,837	10,402	10,283
Physics .....	10,727	10,945	10,658	10,093	9,431	8,839	8,386	8,086
Physical sciences, n.e.c. ....	73	87	107	143	128	107	106	115
Earth, atmos., & ocean sci., total .....	7,197	7,588	7,815	7,676	7,387	6,955	6,676	6,386
Atmospheric sciences .....	682	760	783	775	742	773	729	641
Geosciences .....	4,154	4,296	4,338	4,174	4,000	3,780	3,627	3,388
Oceanography .....	1,306	1,357	1,385	1,476	1,360	1,235	1,150	1,129
Earth, atmos., & ocean sci., n.e.c. ....	1,055	1,175	1,309	1,251	1,285	1,167	1,170	1,228
Mathematical sciences .....	10,035	10,250	10,096	9,810	9,213	8,797	8,171	7,810
Computer sciences .....	13,035	13,936	13,791	13,127	12,840	13,088	13,541	14,385
Agricultural sciences .....	6,424	6,454	6,281	6,166	6,158	5,847	5,598	5,400
Biological sciences, total .....	23,498	24,230	24,920	25,493	25,297	24,737	24,030	23,648
Anatomy .....	507	509	517	507	513	557	544	516
Biochemistry .....	2,923	2,979	2,979	3,020	2,952	2,826	2,763	2,775
Biology .....	5,202	5,253	5,421	5,479	5,315	5,317	5,302	5,090
Biometry/epidemiology .....	649	727	887	882	872	884	784	1,006
Biophysics .....	498	528	533	554	568	567	517	509
Botany .....	1,396	1,397	1,409	1,354	1,202	1,164	1,084	1,025
Cell biology .....	1,480	1,625	1,714	1,949	2,002	1,969	1,999	1,981
Ecology .....	531	557	565	641	705	662	625	626
Entomology/parasitology .....	720	714	709	710	698	680	636	645
Genetics .....	711	744	811	748	789	799	774	710
Microbio., immunology, & virology .....	2,339	2,363	2,388	2,443	2,419	2,325	2,241	2,235
Nutrition .....	991	949	1,004	986	1,012	1,015	876	850
Pathology .....	666	656	707	773	751	704	727	666
Pharmacology .....	1,230	1,278	1,327	1,400	1,308	1,282	1,287	1,310
Physiology .....	1,288	1,295	1,326	1,319	1,394	1,314	1,243	1,182
Zoology .....	1,070	1,101	1,037	987	1,014	920	855	780
Biosciences, n.e.c. ....	1,297	1,555	1,586	1,741	1,783	1,752	1,773	1,742
Psychology .....	10,957	11,171	11,189	11,131	10,903	10,794	10,846	10,657
Social sciences, total .....	29,748	31,227	31,286	31,006	30,520	30,127	28,774	27,507
Agricultural economics .....	1,477	1,512	1,358	1,302	1,314	1,195	1,135	1,103
Anthropology (cultural & social) .....	2,123	2,193	2,258	2,384	2,434	2,435	2,368	2,292
Economics (except agricultural) .....	7,175	7,343	7,253	7,091	6,844	6,640	6,068	5,865
Geography .....	1,667	1,851	1,966	2,028	1,869	1,878	1,828	1,761
Linguistics .....	1,151	1,025	1,053	997	981	943	827	775
Political science .....	9,724	10,444	10,595	10,226	9,889	9,755	9,279	8,840
Sociology .....	2,809	2,912	2,766	2,715	2,719	2,689	2,670	2,471
Sociology/anthropology .....	291	287	308	278	269	258	263	241
Social sciences, other .....	3,331	3,660	3,729	3,985	4,201	4,334	4,336	4,159
Engineering, total .....	61,351	63,762	62,598	59,989	56,278	54,025	53,074	52,777
Aerospace engineering .....	3,071	3,043	2,971	2,722	2,417	2,293	2,226	2,251
Agricultural engineering .....	715	714	709	704	679	619	560	545
Biomedical engineering .....	1,422	1,640	1,685	1,703	1,689	1,678	1,733	1,748
Chemical engineering .....	4,803	4,849	4,875	4,912	4,734	4,594	4,425	4,209
Civil engineering .....	9,309	10,126	9,934	9,855	9,431	8,937	8,361	8,109
Electrical engineering .....	17,739	18,570	17,926	17,021	15,747	15,441	16,097	16,621
Engineering science .....	1,182	1,230	1,195	1,145	1,061	883	843	892
Industrial/manufacturing eng. ....	4,556	4,906	4,729	4,612	4,191	4,037	3,977	3,855
Mechanical engineering .....	10,745	11,297	11,210	10,658	9,993	9,500	9,143	8,840
Metallurgical/materials eng. ....	3,316	3,467	3,447	3,268	3,064	2,878	2,806	2,810
Nuclear engineering .....	935	935	926	880	776	649	586	551
Engineering, other .....	3,558	2,985	2,991	2,509	2,496	2,516	2,317	2,346
Total, health fields .....	8,450	9,033	9,926	10,753	11,367	12,350	13,138	13,585
Clinical fields .....	995	1,040	1,110	1,126	1,111	1,156	1,361	1,325
Dental sciences .....	623	684	702	723	726	722	765	796
Nursing .....	468	464	546	609	707	786	899	984
Pharmaceutical sciences .....	1,303	1,213	1,201	1,221	1,192	1,223	1,170	1,203
Preventive medicine/community health .....	1,778	1,886	2,114	2,153	2,248	2,281	2,249	2,414
Speech pathology/audiology .....	506	578	665	690	695	746	785	837
Veterinary sciences .....	436	439	372	369	378	384	484	448
Other health fields .....	2,341	2,729	3,216	3,862	4,310	5,052	5,425	5,578

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 20. Female full-time graduate students in science, engineering, and health fields  
in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	113,500	121,785	128,889	134,701	137,947	141,320	143,743	146,404
Total, science and engineering fields .....	92,084	98,719	103,166	106,373	107,419	109,411	110,540	111,897
Sciences, total .....	82,401	88,055	91,967	94,796	95,923	97,585	98,028	98,925
Physical sciences, total .....	7,272	7,500	7,723	7,766	7,664	7,543	7,434	7,350
Astronomy .....	169	181	190	221	214	224	204	221
Chemistry .....	5,327	5,517	5,739	5,795	5,740	5,669	5,617	5,491
Physics .....	1,715	1,744	1,739	1,673	1,621	1,561	1,537	1,575
Physical sciences, n.e.c. ....	61	58	55	77	89	89	76	63
Earth, atmos., & ocean sci., total .....	3,176	3,398	3,552	3,794	3,888	3,871	3,874	4,103
Atmospheric sciences .....	177	199	197	218	217	207	237	215
Geosciences .....	1,534	1,589	1,632	1,772	1,796	1,799	1,805	1,826
Oceanography .....	685	776	792	857	868	839	821	918
Earth, atmos., & ocean sci., n.e.c. ....	780	834	931	947	1,007	1,026	1,011	1,144
Mathematical sciences .....	4,221	4,429	4,434	4,416	4,197	4,169	3,973	3,972
Computer sciences .....	3,481	3,550	3,583	3,547	3,650	4,085	4,793	5,352
Agricultural sciences .....	2,865	2,998	3,187	3,326	3,462	3,451	3,512	3,600
Biological sciences, total .....	19,202	20,159	21,561	22,524	23,033	23,007	22,967	23,360
Anatomy .....	454	451	460	476	465	485	489	445
Biochemistry .....	2,031	2,066	2,195	2,202	2,251	2,145	2,042	2,097
Biology .....	4,237	4,425	4,607	4,607	4,658	4,726	4,997	4,914
Biometry/epidemiology .....	782	907	1,103	1,174	1,221	1,278	1,221	1,553
Biophysics .....	181	200	222	216	232	240	211	198
Botany .....	908	904	944	995	947	966	967	968
Cell biology .....	1,236	1,336	1,475	1,647	1,692	1,701	1,664	1,776
Ecology .....	388	440	492	562	599	581	575	604
Entomology/parasitology .....	294	302	330	356	343	347	359	355
Genetics .....	701	782	879	854	830	854	892	911
Microbio., immunology, & virology .....	2,069	2,097	2,219	2,262	2,254	2,212	2,175	2,175
Nutrition .....	1,887	1,914	2,041	2,235	2,419	2,467	2,413	2,327
Pathology .....	447	509	589	616	631	651	693	673
Pharmacology .....	1,074	1,119	1,173	1,272	1,221	1,217	1,159	1,235
Physiology .....	875	865	894	902	982	903	859	808
Zoology .....	712	688	710	730	732	708	665	644
Biosciences, n.e.c. ....	926	1,154	1,228	1,418	1,556	1,526	1,586	1,677
Psychology .....	21,301	22,991	23,593	24,157	24,319	24,674	24,761	24,925
Social sciences, total .....	20,883	23,030	24,334	25,266	25,710	26,785	26,714	26,263
Agricultural economics .....	534	593	605	634	663	589	583	567
Anthropology (cultural & social) .....	2,956	3,144	3,171	3,453	3,358	3,568	3,431	3,442
Economics (except agricultural) .....	2,675	2,841	2,854	2,854	2,899	2,908	2,745	2,729
Geography .....	872	950	1,060	1,091	1,093	1,081	1,139	1,146
Linguistics .....	1,398	1,452	1,485	1,521	1,505	1,587	1,533	1,459
Political science .....	6,359	7,223	7,777	7,692	7,741	7,914	7,792	7,404
Sociology .....	3,140	3,557	3,859	4,005	3,973	3,921	4,047	4,029
Sociology/anthropology .....	333	364	331	415	394	362	403	374
Social sciences, other .....	2,616	2,906	3,192	3,601	4,084	4,855	5,041	5,113
Engineering, total .....	9,683	10,664	11,199	11,577	11,496	11,826	12,512	12,972
Aerospace engineering .....	254	263	291	278	276	283	303	314
Agricultural engineering .....	108	126	126	175	180	180	188	211
Biomedical engineering .....	503	527	584	589	626	638	729	765
Chemical engineering .....	985	1,097	1,166	1,193	1,223	1,315	1,359	1,392
Civil engineering .....	2,019	2,328	2,524	2,786	2,817	2,854	2,907	2,937
Electrical engineering .....	2,165	2,426	2,444	2,391	2,440	2,548	2,830	3,169
Engineering science .....	182	185	202	202	182	174	175	222
Industrial/manufacturing eng. ....	1,042	1,175	1,173	1,298	1,151	1,091	1,098	1,087
Mechanical engineering .....	942	1,086	1,185	1,217	1,135	1,190	1,289	1,233
Metallurgical/materials eng. ....	742	807	802	840	816	815	855	892
Nuclear engineering .....	145	149	144	117	107	122	122	111
Engineering, other .....	596	495	558	491	543	616	657	639
Total, health fields .....	21,416	23,066	25,723	28,328	30,528	31,909	33,203	34,507
Clinical fields .....	816	998	1,107	1,248	1,236	1,239	1,404	1,337
Dental sciences .....	252	304	303	325	370	394	470	487
Nursing .....	6,007	5,958	6,329	7,305	7,854	7,867	8,136	8,044
Pharmaceutical sciences .....	895	861	932	967	960	1,003	1,070	1,117
Preventive medicine/community health .....	2,641	2,903	3,220	3,272	3,656	3,501	3,487	4,094
Speech pathology/audiology .....	5,993	6,566	7,444	8,017	8,369	8,903	9,122	9,304
Veterinary sciences .....	281	315	321	327	355	352	501	522
Other health fields .....	4,531	5,161	6,067	6,867	7,728	8,650	9,013	9,602

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all surveyed fields .....	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Total U.S. citizens or permanent residents .....	211,592	225,879	236,316	242,299	242,431	241,072	238,362	236,490
Black, non-Hispanic .....	8,863	10,219	11,387	11,965	12,501	12,989	13,570	13,743
American Indian/Alaskan Native .....	857	1,014	1,063	1,138	1,254	1,307	1,361	1,350
Asian/Pacific Islander .....	12,489	14,709	16,941	19,177	19,072	19,499	20,002	21,046
Hispanic .....	8,195	9,076	9,798	9,878	11,040	11,349	11,464	12,014
White, non-Hispanic .....	172,434	181,698	187,128	191,378	187,792	185,596	180,567	177,109
Other or unknown .....	8,754	9,163	9,999	8,763	10,772	10,332	11,398	11,228
Students with temporary visas .....	95,448	96,730	93,363	89,830	86,717	87,381	88,687	91,119
Total, science and engineering .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Total U.S. citizens or permanent residents .....	185,487	197,473	204,484	206,851	204,163	200,783	196,013	192,407
Black, non-Hispanic .....	7,692	8,904	9,903	10,343	10,668	10,986	11,411	11,264
American Indian/Alaskan Native .....	717	847	896	960	1,055	1,087	1,124	1,102
Asian/Pacific Islander .....	11,267	13,317	15,197	17,170	16,771	16,814	17,015	17,681
Hispanic .....	6,931	7,595	8,200	8,184	9,082	9,321	9,567	9,985
White, non-Hispanic .....	150,939	158,434	161,321	162,784	157,498	153,837	147,440	142,911
Other or unknown .....	7,941	8,376	8,967	7,410	9,089	8,738	9,456	9,464
Students with temporary visas .....	91,687	93,037	89,546	86,197	83,090	83,411	84,695	87,110
Sciences, total .....	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Total U.S. citizens or permanent residents .....	148,396	157,575	163,261	165,684	165,564	164,295	161,207	158,990
Black, non-Hispanic .....	6,552	7,545	8,413	8,640	8,978	9,323	9,739	9,679
American Indian/Alaskan Native .....	610	741	773	826	919	946	984	966
Asian/Pacific Islander .....	7,424	8,820	10,336	11,446	11,631	12,000	12,320	12,878
Hispanic .....	5,770	6,222	6,682	6,564	7,459	7,663	7,978	8,338
White, non-Hispanic .....	122,871	128,490	130,976	132,701	129,698	127,657	122,723	119,458
Other or unknown .....	5,169	5,757	6,081	5,507	6,879	6,706	7,463	7,671
Students with temporary visas .....	57,744	58,509	56,972	55,798	53,915	54,048	53,915	54,778
Physical sciences .....	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Total U.S. citizens or permanent residents .....	18,267	18,759	19,231	19,130	18,410	17,639	16,796	16,460
Black, non-Hispanic .....	529	630	690	709	729	769	741	725
American Indian/Alaskan Native .....	56	63	73	60	66	55	58	57
Asian/Pacific Islander .....	1,219	1,336	1,652	1,600	1,462	1,422	1,345	1,442
Hispanic .....	562	572	591	575	586	604	649	679
White, non-Hispanic .....	15,412	15,566	15,681	15,652	14,813	14,177	13,284	12,851
Other or unknown .....	489	592	544	534	754	612	719	706
Students with temporary visas .....	11,850	11,914	11,380	10,913	10,492	10,317	10,096	9,940
Earth, atmospheric, & ocean sciences .....	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Total U.S. citizens or permanent residents .....	7,802	8,309	8,680	8,608	8,689	8,430	8,328	8,302
Black, non-Hispanic .....	97	128	142	129	136	130	138	136
American Indian/Alaskan Native .....	18	23	29	39	40	42	46	58
Asian/Pacific Islander .....	200	287	375	328	318	291	288	304
Hispanic .....	194	222	289	240	259	263	275	255
White, non-Hispanic .....	7,041	7,302	7,516	7,678	7,657	7,447	7,266	7,187
Other or unknown .....	252	347	329	194	279	257	315	362
Students with temporary visas .....	2,571	2,677	2,687	2,862	2,586	2,396	2,222	2,187
Mathematical sciences .....	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Total U.S. citizens or permanent residents .....	8,380	8,939	9,056	8,876	8,291	7,885	7,262	7,090
Black, non-Hispanic .....	276	331	411	412	423	422	386	355
American Indian/Alaskan Native .....	12	20	13	26	41	31	32	22
Asian/Pacific Islander .....	555	625	648	802	738	755	693	786
Hispanic .....	225	231	258	213	234	216	242	260
White, non-Hispanic .....	6,762	7,144	7,048	6,993	6,443	6,138	5,572	5,300
Other or unknown .....	550	588	678	430	412	323	337	367
Students with temporary visas .....	5,876	5,740	5,474	5,350	5,119	5,081	4,882	4,692
Computer sciences .....	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Total U.S. citizens or permanent residents .....	8,426	8,852	8,985	8,731	8,610	8,374	8,588	9,041
Black, non-Hispanic .....	446	411	460	465	485	475	494	469
American Indian/Alaskan Native .....	18	25	26	11	22	20	22	47
Asian/Pacific Islander .....	1,191	1,387	1,505	1,702	1,652	1,733	1,964	2,371
Hispanic .....	194	225	217	215	256	236	241	263
White, non-Hispanic .....	5,936	6,129	6,018	5,924	5,726	5,437	5,220	5,290
Other or unknown .....	641	675	759	414	469	473	647	601
Students with temporary visas .....	8,090	8,634	8,389	7,943	7,880	8,799	9,746	10,696

See explanatory information, if any, and SOURCE at end of table.

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Agricultural sciences .....	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Total U.S. citizens or permanent residents .....	6,405	6,590	6,661	6,680	6,866	6,725	6,741	6,761
Black, non-Hispanic .....	113	163	162	162	227	194	176	207
American Indian/Alaskan Native .....	27	31	31	27	46	37	47	56
Asian/Pacific Islander .....	197	174	223	211	215	221	237	240
Hispanic .....	236	232	256	217	221	277	294	289
White, non-Hispanic .....	5,727	5,811	5,828	5,913	5,932	5,816	5,725	5,759
Other or unknown .....	105	179	161	150	225	180	262	210
Students with temporary visas .....	2,884	2,862	2,807	2,812	2,754	2,573	2,369	2,239
Biological sciences .....	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Total U.S. citizens or permanent residents .....	31,102	32,558	34,520	36,228	37,196	37,229	36,765	36,529
Black, non-Hispanic .....	997	1,119	1,348	1,369	1,450	1,513	1,734	1,663
American Indian/Alaskan Native .....	91	115	123	141	160	158	166	161
Asian/Pacific Islander .....	1,985	2,357	2,908	3,420	3,759	3,874	3,826	3,807
Hispanic .....	1,100	1,169	1,334	1,344	1,477	1,468	1,613	1,665
White, non-Hispanic .....	26,275	27,064	27,906	29,036	29,139	29,028	28,041	27,705
Other or unknown .....	654	734	901	918	1,211	1,188	1,385	1,528
Students with temporary visas .....	11,598	11,831	11,961	11,789	11,134	10,515	10,232	10,479
Psychology .....	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Total U.S. citizens or permanent residents .....	30,634	32,548	33,196	33,430	33,574	33,845	33,936	33,837
Black, non-Hispanic .....	1,424	1,656	1,854	2,046	2,028	2,087	2,224	2,424
American Indian/Alaskan Native .....	180	210	214	234	255	270	263	226
Asian/Pacific Islander .....	749	946	1,090	1,160	1,168	1,329	1,438	1,478
Hispanic .....	1,587	1,648	1,610	1,505	1,944	2,093	2,111	2,386
White, non-Hispanic .....	25,610	26,849	27,239	27,138	26,664	26,561	26,281	25,739
Other or unknown .....	1,084	1,239	1,189	1,347	1,515	1,505	1,619	1,584
Students with temporary visas .....	1,624	1,614	1,586	1,858	1,648	1,623	1,671	1,745
Social sciences .....	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Total U.S. citizens or permanent residents .....	37,380	41,020	42,932	44,001	43,928	44,168	42,791	40,970
Black, non-Hispanic .....	2,670	3,107	3,346	3,348	3,500	3,733	3,846	3,700
American Indian/Alaskan Native .....	208	254	264	288	289	333	350	339
Asian/Pacific Islander .....	1,328	1,708	1,935	2,223	2,319	2,375	2,529	2,450
Hispanic .....	1,672	1,923	2,127	2,255	2,482	2,506	2,553	2,541
White, non-Hispanic .....	30,108	32,625	33,740	34,367	33,324	33,053	31,334	29,627
Other or unknown .....	1,394	1,403	1,520	1,520	2,014	2,168	2,179	2,313
Students with temporary visas .....	13,251	13,237	12,688	12,271	12,302	12,744	12,697	12,800
Engineering, total .....	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Total U.S. citizens or permanent residents .....	37,091	39,898	41,223	41,167	38,599	36,488	34,806	33,417
Black, non-Hispanic .....	1,140	1,359	1,490	1,703	1,690	1,663	1,672	1,585
American Indian/Alaskan Native .....	107	106	123	134	136	141	140	136
Asian/Pacific Islander .....	3,843	4,497	4,861	5,724	5,140	4,814	4,695	4,803
Hispanic .....	1,161	1,373	1,518	1,620	1,623	1,658	1,589	1,647
White, non-Hispanic .....	28,068	29,944	30,345	30,083	27,800	26,180	24,717	23,453
Other or unknown .....	2,772	2,619	2,886	1,903	2,210	2,032	1,993	1,793
Students with temporary visas .....	33,943	34,528	32,574	30,399	29,175	29,363	30,780	32,332
Chemical engineering .....	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Total U.S. citizens or permanent residents .....	2,798	2,948	3,107	3,370	3,304	3,368	3,263	3,044
Black, non-Hispanic .....	95	108	115	133	134	143	128	126
American Indian/Alaskan Native .....	22	11	12	15	18	21	13	16
Asian/Pacific Islander .....	311	274	348	395	351	378	405	356
Hispanic .....	110	131	131	134	164	159	115	146
White, non-Hispanic .....	2,193	2,315	2,395	2,578	2,531	2,527	2,484	2,291
Other or unknown .....	67	109	106	115	106	140	118	109
Students with temporary visas .....	2,990	2,998	2,934	2,735	2,653	2,541	2,521	2,557
Civil engineering .....	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Total U.S. citizens or permanent residents .....	6,140	7,003	7,440	7,848	7,652	7,509	7,011	6,811
Black, non-Hispanic .....	153	188	229	230	261	242	247	230
American Indian/Alaskan Native .....	20	20	26	23	27	36	41	26
Asian/Pacific Islander .....	459	558	601	776	760	719	625	711
Hispanic .....	227	277	337	354	378	452	441	463
White, non-Hispanic .....	5,030	5,663	5,926	6,212	5,892	5,706	5,386	5,088
Other or unknown .....	251	297	321	253	334	354	271	293
Students with temporary visas .....	5,188	5,451	5,018	4,793	4,596	4,282	4,257	4,235

See explanatory information, if any, and SOURCE at end of table.

**Table 21. Full-time graduate students in science, engineering, and health fields in all institutions, by field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Field, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Electrical engineering .....	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Total U.S. citizens or permanent residents .....	9,976	10,577	10,428	10,467	9,382	8,714	8,516	8,153
Black, non-Hispanic .....	371	437	479	538	484	445	481	466
American Indian/Alaskan Native .....	26	26	27	23	29	27	25	13
Asian/Pacific Islander .....	1,498	1,766	1,690	2,147	1,889	1,830	1,766	1,854
Hispanic .....	331	378	419	415	385	374	389	391
White, non-Hispanic .....	6,853	7,116	7,003	6,701	5,893	5,420	5,141	4,887
Other or unknown .....	897	854	810	643	702	618	714	542
Students with temporary visas .....	9,928	10,419	9,942	8,945	8,805	9,275	10,411	11,637
Industrial engineering .....	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Total U.S. citizens or permanent residents .....	2,760	3,076	3,209	3,180	2,863	2,512	2,398	2,237
Black, non-Hispanic .....	153	191	181	197	200	189	185	163
American Indian/Alaskan Native .....	9	14	14	9	4	8	8	5
Asian/Pacific Islander .....	232	336	392	359	337	285	300	288
Hispanic .....	103	122	144	160	146	153	143	125
White, non-Hispanic .....	2,000	2,160	2,161	2,293	1,921	1,733	1,636	1,550
Other or unknown .....	263	253	317	162	255	144	126	126
Students with temporary visas .....	2,838	3,005	2,693	2,730	2,479	2,616	2,677	2,705
Mechanical engineering .....	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Total U.S. citizens or permanent residents .....	6,120	6,803	7,228	7,090	6,548	6,024	5,591	5,212
Black, non-Hispanic .....	149	199	225	283	285	298	315	285
American Indian/Alaskan Native .....	9	14	19	25	30	23	22	19
Asian/Pacific Islander .....	578	709	826	969	804	705	631	626
Hispanic .....	193	207	215	250	257	237	234	238
White, non-Hispanic .....	4,592	5,169	5,289	5,175	4,774	4,438	4,073	3,695
Other or unknown .....	599	505	654	388	398	323	316	349
Students with temporary visas .....	5,567	5,580	5,167	4,785	4,580	4,666	4,841	4,861
Other engineering .....	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Total U.S. citizens or permanent residents .....	9,297	9,491	9,811	9,212	8,850	8,361	8,027	7,960
Black, non-Hispanic .....	219	236	261	322	326	346	316	315
American Indian/Alaskan Native .....	21	21	25	39	28	26	31	57
Asian/Pacific Islander .....	765	854	1,004	1,078	999	897	968	988
Hispanic .....	197	258	272	307	293	283	267	284
White, non-Hispanic .....	7,400	7,521	7,571	7,124	6,789	6,356	5,997	5,942
Other or unknown .....	695	601	678	342	415	453	448	374
Students with temporary visas .....	7,432	7,075	6,820	6,411	6,062	5,983	6,073	6,337
Total, health fields .....	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Total U.S. citizens or permanent residents .....	26,105	28,406	31,832	35,448	38,268	40,289	42,349	44,083
Black, non-Hispanic .....	1,171	1,315	1,484	1,622	1,833	2,003	2,159	2,479
American Indian/Alaskan Native .....	140	167	167	178	199	220	237	248
Asian/Pacific Islander .....	1,222	1,392	1,744	2,007	2,301	2,685	2,987	3,365
Hispanic .....	1,264	1,481	1,598	1,694	1,958	2,028	1,897	2,029
White, non-Hispanic .....	21,495	23,264	25,807	28,594	30,294	31,759	33,127	34,198
Other or unknown .....	813	787	1,032	1,353	1,683	1,594	1,942	1,764
Students with temporary visas .....	3,761	3,693	3,817	3,633	3,627	3,970	3,992	4,009

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 22. Full-time graduate science, engineering, and health students without U.S. citizenship or permanent resident status in all institutions, by detailed field: 1991-1998**

Field	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all surveyed fields .....	95,448	96,730	93,363	89,830	86,717	87,381	88,687	91,119
Total, science and engineering fields .....	91,687	93,037	89,546	86,197	83,090	83,411	84,695	87,110
Sciences, total .....	57,744	58,509	56,972	55,798	53,915	54,048	53,915	54,778
Physical sciences, total .....	11,850	11,914	11,380	10,913	10,492	10,317	10,096	9,940
Astronomy .....	212	219	210	259	225	212	184	206
Chemistry .....	6,338	6,264	6,075	5,915	5,790	5,737	5,610	5,554
Physics .....	5,269	5,395	5,041	4,672	4,419	4,323	4,257	4,120
Physical sciences, n.e.c. ....	31	36	54	67	58	45	45	60
Earth, atmos., & ocean sci., total .....	2,571	2,677	2,687	2,862	2,586	2,396	2,222	2,187
Atmospheric sciences .....	289	307	272	250	248	268	281	234
Geosciences .....	1,406	1,520	1,520	1,559	1,390	1,300	1,178	1,119
Oceanography .....	564	563	557	671	583	510	471	483
Earth, atmos., & ocean sci., n.e.c. ....	312	287	338	382	365	318	292	351
Mathematical sciences .....	5,876	5,740	5,474	5,350	5,119	5,081	4,882	4,692
Computer sciences .....	8,090	8,634	8,389	7,943	7,880	8,799	9,746	10,696
Agricultural sciences .....	2,884	2,862	2,807	2,812	2,754	2,573	2,369	2,239
Biological sciences, total .....	11,598	11,831	11,961	11,789	11,134	10,515	10,232	10,479
Anatomy .....	241	237	239	222	240	217	213	198
Biochemistry .....	1,717	1,721	1,742	1,689	1,582	1,444	1,357	1,384
Biology .....	1,864	1,891	1,829	1,732	1,687	1,679	1,779	1,803
Biometry/epidemiology .....	448	487	542	533	500	468	436	606
Biophysics .....	246	249	214	208	198	175	170	162
Botany .....	849	807	817	739	639	627	610	621
Cell biology .....	619	692	727	848	789	775	762	781
Ecology .....	150	133	165	161	154	143	133	134
Entomology/parasitology .....	335	304	321	323	332	285	259	266
Genetics .....	308	344	367	348	340	373	399	380
Microbio., immunology, & virology .....	1,193	1,141	1,229	1,246	1,129	1,027	952	929
Nutrition .....	1,117	1,076	1,197	1,099	1,116	1,022	956	923
Pathology .....	315	322	339	335	322	319	281	278
Pharmacology .....	632	680	612	627	529	556	536	558
Physiology .....	638	632	597	574	509	420	401	417
Zoology .....	314	295	261	272	228	211	184	166
Biosciences, n.e.c. ....	612	820	763	833	840	774	804	873
Psychology .....	1,624	1,614	1,586	1,858	1,648	1,623	1,671	1,745
Social sciences, total .....	13,251	13,237	12,688	12,271	12,302	12,744	12,697	12,800
Agricultural economics .....	954	995	892	832	899	804	821	786
Anthropology (cultural & social) .....	716	717	675	681	584	592	596	637
Economics (except agricultural) .....	4,779	4,845	4,694	4,579	4,691	4,904	4,773	4,673
Geography .....	410	426	432	398	396	398	442	478
Linguistics .....	1,052	952	908	898	874	883	852	879
Political science .....	2,817	2,803	2,764	2,639	2,675	2,956	2,863	2,932
Sociology .....	1,311	1,299	1,152	1,065	943	936	990	942
Sociology/anthropology .....	110	98	72	77	77	67	73	87
Social sciences, other .....	1,102	1,102	1,099	1,102	1,163	1,204	1,287	1,386
Engineering, total .....	33,943	34,528	32,574	30,399	29,175	29,363	30,780	32,332
Aerospace engineering .....	1,124	1,060	1,084	1,138	1,082	1,159	1,202	1,297
Agricultural engineering .....	493	463	432	441	445	406	351	358
Biomedical engineering .....	662	723	699	730	662	633	652	659
Chemical engineering .....	2,990	2,998	2,934	2,735	2,653	2,541	2,521	2,557
Civil engineering .....	5,188	5,451	5,018	4,793	4,596	4,282	4,257	4,235
Electrical engineering .....	9,928	10,419	9,942	8,945	8,805	9,275	10,411	11,637
Engineering science .....	590	613	573	514	418	426	398	485
Industrial/manufacturing eng. ....	2,838	3,005	2,693	2,730	2,479	2,616	2,677	2,705
Mechanical engineering .....	5,567	5,580	5,167	4,785	4,580	4,666	4,841	4,861
Metallurgical/materials eng. ....	1,991	2,027	1,985	1,773	1,722	1,732	1,767	1,835
Nuclear engineering .....	490	473	436	379	347	284	274	273
Engineering, other .....	2,082	1,716	1,611	1,436	1,386	1,343	1,429	1,430
Total, health fields .....	3,761	3,693	3,817	3,633	3,627	3,970	3,992	4,009
Clinical fields .....	331	382	392	369	256	245	234	226
Dental sciences .....	223	228	236	210	240	281	307	310
Nursing .....	252	215	245	282	296	263	305	306
Pharmaceutical sciences .....	984	974	954	871	957	1,052	1,067	1,052
Preventive medicine/community health .....	962	841	869	728	724	793	765	799
Speech pathology/audiology .....	315	327	339	335	271	291	297	342
Veterinary sciences .....	223	232	223	211	241	266	273	220
Other health fields .....	471	494	559	627	642	779	744	754

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 23. Full-time graduate students in science and engineering fields in all institutions, by field and Carnegie classification: 1991-1998**

Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
All institutions:								
Total, science and engineering fields .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Sciences, total .....	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Physical sciences .....	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Earth, atmospheric, & ocean sciences .....	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Mathematical sciences .....	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Computer sciences .....	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Agricultural sciences .....	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Biological sciences .....	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Psychology .....	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Social sciences .....	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Engineering, total .....	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Research I:								
Total, science and engineering fields .....	170,099	176,703	179,114	177,769	172,924	169,585	165,314	165,003
Sciences, total .....	121,715	126,380	128,608	128,656	126,326	124,280	120,429	119,633
Physical sciences .....	20,718	21,030	20,962	20,470	19,742	19,039	18,255	17,921
Earth, atmospheric, & ocean sciences .....	6,319	6,637	6,808	6,809	6,655	6,317	6,050	6,014
Mathematical sciences .....	8,841	9,154	8,966	8,717	8,338	8,063	7,602	7,402
Computer sciences .....	8,123	8,304	8,335	8,208	8,099	8,110	8,229	8,929
Agricultural sciences .....	6,557	6,570	6,594	6,669	6,648	6,448	6,219	5,998
Biological sciences .....	28,474	29,436	30,543	31,497	31,387	30,884	30,067	30,483
Psychology .....	9,947	10,296	10,332	10,252	10,101	10,052	9,814	9,708
Social sciences .....	32,736	34,953	36,068	36,034	35,356	35,367	34,193	33,178
Engineering, total .....	48,384	50,323	50,506	49,113	46,598	45,305	44,885	45,370
Research II:								
Total, science and engineering fields .....	32,210	33,955	34,071	33,706	33,772	33,077	32,439	31,803
Sciences, total .....	23,560	24,718	25,061	25,137	25,416	25,109	24,290	23,960
Physical sciences .....	3,764	3,874	3,833	3,824	3,690	3,492	3,428	3,296
Earth, atmospheric, & ocean sciences .....	1,328	1,478	1,497	1,551	1,568	1,444	1,420	1,416
Mathematical sciences .....	2,016	1,936	1,931	1,848	1,788	1,670	1,509	1,459
Computer sciences .....	1,519	1,845	1,903	1,839	1,839	1,941	1,786	1,941
Agricultural sciences .....	1,501	1,661	1,640	1,583	1,665	1,573	1,596	1,624
Biological sciences .....	4,258	4,297	4,457	4,610	4,731	4,636	4,663	4,541
Psychology .....	3,148	3,235	3,173	3,281	3,405	3,319	3,177	3,245
Social sciences .....	6,026	6,392	6,627	6,601	6,730	7,034	6,711	6,438
Engineering, total .....	8,650	9,237	9,010	8,569	8,356	7,968	8,149	7,843
Doctorate-granting:								
Total, science and engineering fields .....	40,486	42,795	43,107	44,015	42,306	43,072	43,746	42,654
Sciences, total .....	31,913	33,860	34,468	35,509	34,522	35,140	35,802	34,841
Physical sciences .....	4,273	4,447	4,361	4,276	4,033	4,016	3,863	3,756
Earth, atmospheric, & ocean sciences .....	1,591	1,633	1,740	1,794	1,749	1,724	1,632	1,720
Mathematical sciences .....	2,200	2,336	2,375	2,401	2,172	2,092	1,978	1,858
Computer sciences .....	3,587	3,825	3,760	3,712	3,746	3,983	4,680	4,645
Agricultural sciences .....	501	595	547	600	561	596	535	595
Biological sciences .....	4,318	4,574	4,742	4,995	5,029	4,981	5,002	4,820
Psychology .....	7,806	8,123	8,619	8,946	8,570	8,754	9,233	9,099
Social sciences .....	7,637	8,327	8,324	8,785	8,662	8,994	8,879	8,348
Engineering, total .....	8,573	8,935	8,639	8,506	7,784	7,932	7,944	7,813

See explanatory information, if any, and SOURCE at end of table.

**Table 23. Full-time graduate students in science and engineering fields in all institutions, by field and Carnegie classification: 1991-1998**

Carnegie classification and field	1991	1992	1993	1994	1995	1996	1997	1998
<b>Comprehensive:</b>								
Total, science and engineering fields .....	22,880	24,895	25,393	25,338	25,345	25,552	26,202	26,915
Sciences, total .....	19,322	20,838	21,484	21,575	21,767	22,217	22,912	23,479
Physical sciences .....	1,074	1,042	1,149	1,154	1,152	1,120	1,048	1,149
Earth, atmospheric, & ocean sciences .....	681	752	825	849	825	831	932	841
Mathematical sciences .....	959	1,000	1,007	1,037	919	901	839	852
Computer sciences .....	2,871	3,041	2,891	2,462	2,324	2,691	3,207	3,749
Agricultural sciences .....	655	556	631	588	706	643	730	762
Biological sciences .....	2,259	2,434	2,838	2,775	2,884	2,975	3,058	2,914
Psychology .....	6,761	7,633	7,744	8,171	8,224	8,273	8,101	8,252
Social sciences .....	4,062	4,380	4,399	4,539	4,733	4,783	4,997	4,960
Engineering, total .....	3,558	4,057	3,909	3,763	3,578	3,335	3,290	3,436
<b>Engineering:</b>								
Total, science and engineering fields .....	843	904	936	895	844	818	865	908
Sciences, total .....	374	387	405	367	350	370	352	362
Physical sciences .....	101	97	102	87	82	91	86	79
Earth, atmospheric, & ocean sciences .....	158	161	177	164	153	160	166	175
Mathematical sciences .....	17	13	18	11	8	9	4	8
Computer sciences .....	90	107	102	97	94	95	86	98
Agricultural sciences .....	0	0	0	0	0	0	0	0
Biological sciences .....	8	9	6	8	13	15	10	2
Psychology .....	0	0	0	0	0	0	0	0
Social sciences .....	0	0	0	0	0	0	0	0
Engineering, total .....	469	517	531	528	494	448	513	546
<b>Liberal arts:</b>								
Total, science and engineering fields .....	1,545	1,658	1,513	1,585	1,449	1,419	1,287	1,064
Sciences, total .....	1,444	1,539	1,441	1,507	1,362	1,340	1,219	1,016
Physical sciences .....	88	94	94	100	85	85	94	79
Earth, atmospheric, & ocean sciences .....	119	139	133	118	107	108	123	112
Mathematical sciences .....	26	32	32	34	25	26	16	17
Computer sciences .....	10	9	5	6	2	5	2	0
Agricultural sciences .....	75	70	56	52	40	38	30	21
Biological sciences .....	115	114	118	123	115	112	114	110
Psychology .....	979	1,023	953	989	928	907	801	644
Social sciences .....	32	58	50	85	60	59	39	33
Engineering, total .....	101	119	72	78	87	79	68	48
<b>Other:</b>								
Total, science and engineering fields .....	9,111	9,600	9,896	9,740	10,613	10,671	10,855	11,170
Sciences, total .....	7,812	8,362	8,766	8,731	9,736	9,887	10,118	10,477
Physical sciences .....	99	89	110	132	118	113	118	120
Earth, atmospheric, & ocean sciences .....	177	186	187	185	218	242	227	211
Mathematical sciences .....	197	208	201	178	160	205	196	186
Computer sciences .....	316	355	378	350	386	348	344	375
Agricultural sciences .....	0	0	0	0	0	0	0	0
Biological sciences .....	3,268	3,525	3,777	4,009	4,171	4,141	4,083	4,138
Psychology .....	3,617	3,852	3,961	3,649	3,994	4,163	4,481	4,634
Social sciences .....	138	147	152	228	689	675	669	813
Engineering, total .....	1,299	1,238	1,130	1,009	877	784	737	693

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all surveyed fields:</b>								
Total, all sources .....	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Federal, total .....	63,014	65,626	67,688	68,566	67,310	65,252	64,598	64,109
Dept. of Defense .....	9,128	9,247	9,750	9,449	9,339	8,802	9,052	8,355
Dept. of HHS, total .....	20,493	21,428	22,038	22,680	22,787	22,371	22,560	22,819
NIH .....	16,018	17,093	18,137	18,295	18,111	17,932	18,142	18,332
Other HHS .....	4,475	4,335	3,901	4,385	4,676	4,439	4,418	4,487
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2,309	2,586	2,645
NSF .....	12,666	13,366	13,530	13,990	13,661	13,412	13,375	13,532
USDA .....	3,075	3,216	3,324	3,422	3,254	3,004	2,646	2,485
All other Federal .....	17,652	18,369	19,046	19,025	18,269	15,354	14,379	14,273
Institutional support .....	125,387	127,923	129,019	129,295	129,397	128,457	128,932	128,890
Other outside support, total .....	27,070	27,769	26,714	27,255	25,952	25,404	25,050	26,339
All other U.S. ....	20,427	21,309	21,233	21,537	20,405	20,154	20,237	22,121
Foreign .....	6,643	6,460	5,481	5,718	5,547	5,250	4,813	4,218
Self-support .....	91,569	101,291	106,258	107,013	106,489	109,340	108,469	108,271
<b>Total, science and engineering:</b>								
Total, all sources .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Federal, total .....	56,046	58,298	60,393	60,789	59,408	57,857	56,840	56,148
Dept. of Defense .....	8,711	8,848	9,315	9,067	9,006	8,471	8,732	8,048
Dept. of HHS, total .....	15,472	16,274	16,827	17,148	17,110	16,914	16,813	16,925
NIH .....	14,172	15,043	15,871	15,950	15,672	15,485	15,349	15,444
Other HHS .....	1,300	1,231	956	1,198	1,438	1,429	1,464	1,481
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2,295	2,565	2,619
NSF .....	12,610	13,296	13,441	13,873	13,561	13,330	13,272	13,398
USDA .....	3,015	3,147	3,246	3,348	3,199	2,954	2,604	2,437
All other Federal .....	16,238	16,733	17,564	17,353	16,532	13,893	12,854	12,721
Institutional support .....	117,907	120,276	120,899	120,834	120,417	119,086	119,267	118,815
Other outside support, total .....	25,549	26,075	24,971	25,390	23,926	23,379	23,081	24,169
All other U.S. ....	19,367	20,075	19,933	20,130	18,909	18,559	18,754	20,363
Foreign .....	6,182	6,000	5,038	5,260	5,017	4,820	4,327	3,806
Self-support .....	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385
<b>Sciences, total:</b>								
Total, all sources .....	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Federal, total .....	40,064	41,734	43,503	43,938	43,047	42,024	40,934	40,489
Dept. of Defense .....	3,840	3,895	4,176	4,350	4,196	3,933	3,928	3,689
Dept. of HHS, total .....	14,662	15,373	15,903	16,242	16,192	16,079	15,897	15,944
NIH .....	13,448	14,245	15,077	15,168	14,904	14,754	14,582	14,615
Other HHS .....	1,214	1,128	826	1,074	1,288	1,325	1,315	1,329
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	1,202	1,304	1,376
NSF .....	8,313	8,691	8,880	9,109	8,981	8,737	8,654	8,647
USDA .....	2,741	2,789	2,940	3,003	2,858	2,663	2,390	2,254
All other Federal .....	10,508	10,986	11,604	11,234	10,820	9,410	8,761	8,579
Institutional support .....	93,291	95,350	95,940	96,269	96,585	95,694	95,499	95,587
Other outside support, total .....	14,923	15,525	15,254	16,012	14,819	14,505	14,129	14,383
All other U.S. ....	10,831	11,556	11,860	12,364	11,457	11,222	11,209	11,770
Foreign .....	4,092	3,969	3,394	3,648	3,362	3,283	2,920	2,613
Self-support .....	57,862	63,475	65,536	65,263	65,028	66,120	64,560	63,309
<b>Physical sciences:</b>								
Total, all sources .....	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Federal, total .....	10,834	11,007	11,140	11,032	10,359	9,887	9,470	9,157
Dept. of Defense .....	1,226	1,194	1,187	1,316	1,198	1,073	1,037	994
Dept. of HHS, total .....	2,042	2,188	2,162	2,209	2,078	2,078	1,967	1,909
NIH .....	1,874	2,056	2,051	2,074	1,898	1,795	1,651	1,649
Other HHS .....	168	132	111	135	180	283	316	260
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	538	586	595
NSF .....	3,571	3,601	3,623	3,703	3,605	3,385	3,378	3,328
USDA .....	61	68	61	42	38	43	31	40
All other Federal .....	3,934	3,956	4,107	3,762	3,440	2,770	2,471	2,291
Institutional support .....	15,049	15,358	15,148	14,831	14,848	14,349	14,131	14,069
Other outside support, total .....	2,228	2,349	2,234	2,316	2,081	2,096	1,863	1,849
All other U.S. ....	1,927	2,044	1,955	2,008	1,794	1,802	1,645	1,660
Foreign .....	301	305	279	308	287	294	218	189
Self-support .....	2,006	1,959	2,089	1,864	1,614	1,624	1,428	1,325

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Earth, atmospheric, &amp; ocean sciences:</b>								
Total, all sources .....	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Federal, total .....	3,119	3,436	3,652	3,630	3,472	3,273	3,119	2,963
Dept. of Defense .....	452	472	517	494	410	393	366	336
Dept. of HHS, total .....	56	49	48	37	33	49	40	40
NIH .....	23	43	41	36	30	30	27	23
Other HHS .....	33	6	7	1	3	19	13	17
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	331	355	390
NSF .....	1,223	1,320	1,366	1,409	1,387	1,242	1,201	1,122
USDA .....	69	86	64	61	65	75	52	77
All other Federal .....	1,319	1,509	1,657	1,629	1,577	1,183	1,105	998
Institutional support .....	4,314	4,316	4,366	4,343	4,441	4,273	4,389	4,449
Other outside support, total .....	974	1,006	928	1,023	968	918	884	860
All other U.S. ....	687	761	735	790	733	701	700	696
Foreign .....	287	245	193	233	235	217	184	164
Self-support .....	1,966	2,228	2,421	2,474	2,394	2,362	2,158	2,217
<b>Mathematical sciences:</b>								
Total, all sources .....	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Federal, total .....	1,503	1,497	1,474	1,397	1,287	1,237	1,152	1,049
Dept. of Defense .....	376	386	399	372	322	351	363	283
Dept. of HHS, total .....	69	118	80	76	87	82	96	102
NIH .....	64	111	74	68	63	61	66	70
Other HHS .....	5	7	6	8	24	21	30	32
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	21	19	11
NSF .....	452	457	470	518	474	435	386	387
USDA .....	21	25	28	16	13	9	16	7
All other Federal .....	585	511	497	415	391	339	272	259
Institutional support .....	9,531	9,578	9,394	9,461	9,151	8,836	8,469	8,315
Other outside support, total .....	590	626	524	552	496	554	491	450
All other U.S. ....	321	356	303	333	309	347	314	311
Foreign .....	269	270	221	219	187	207	177	139
Self-support .....	2,632	2,978	3,138	2,816	2,476	2,339	2,032	1,968
<b>Computer sciences:</b>								
Total, all sources .....	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Federal, total .....	2,533	2,661	2,918	3,070	3,175	3,105	3,173	3,326
Dept. of Defense .....	1,131	1,210	1,327	1,345	1,419	1,349	1,434	1,312
Dept. of HHS, total .....	71	104	107	103	111	113	106	123
NIH .....	65	101	99	95	93	80	78	88
Other HHS .....	6	3	8	8	18	33	28	35
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	121	122	124
NSF .....	896	962	1,004	1,046	1,053	1,049	1,087	1,177
USDA .....	8	6	7	9	13	13	12	10
All other Federal .....	427	379	473	567	579	460	412	580
Institutional support .....	5,474	5,609	5,509	5,437	5,488	5,641	5,916	6,159
Other outside support, total .....	1,322	1,350	1,383	1,393	1,300	1,166	1,182	1,251
All other U.S. ....	972	1,029	1,131	1,107	1,063	919	1,025	1,077
Foreign .....	350	321	252	286	237	247	157	174
Self-support .....	7,187	7,866	7,564	6,774	6,527	7,261	8,063	9,001
<b>Agricultural sciences:</b>								
Total, all sources .....	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Federal, total .....	1,896	1,993	1,965	1,922	2,061	1,973	1,783	1,685
Dept. of Defense .....	26	18	37	35	32	38	39	51
Dept. of HHS, total .....	46	41	34	50	25	31	30	30
NIH .....	38	38	32	47	19	17	21	15
Other HHS .....	8	3	2	3	6	14	9	15
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	28	28	36
NSF .....	61	76	76	87	92	97	102	93
USDA .....	1,117	1,110	1,150	1,114	1,195	1,069	956	958
All other Federal .....	646	748	668	636	717	710	628	517
Institutional support .....	3,535	3,621	3,635	3,810	3,884	3,681	3,671	3,766
Other outside support, total .....	1,715	1,685	1,681	1,671	1,484	1,443	1,566	1,583
All other U.S. ....	1,059	1,099	1,189	1,153	1,081	1,088	1,227	1,287
Foreign .....	656	586	492	518	403	355	339	296
Self-support .....	2,143	2,153	2,187	2,089	2,191	2,201	2,090	1,966

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Biological sciences:</b>								
Total, all sources .....	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Federal, total .....	14,503	15,148	16,210	16,724	16,627	16,549	16,338	16,209
Dept. of Defense .....	223	232	273	346	359	365	373	357
Dept. of HHS, total .....	10,667	11,054	11,632	11,979	12,058	11,876	11,863	11,892
NIH .....	10,215	10,637	11,314	11,464	11,386	11,287	11,279	11,274
Other HHS .....	452	417	318	515	672	589	584	618
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	90	109	103
NSF .....	1,282	1,347	1,382	1,382	1,407	1,494	1,535	1,534
USDA .....	1,062	1,083	1,222	1,289	1,090	1,071	927	807
All other Federal .....	1,269	1,432	1,701	1,728	1,713	1,653	1,531	1,516
Institutional support .....	19,267	19,753	20,028	20,712	20,832	20,417	20,331	20,245
Other outside support, total .....	3,735	3,787	3,864	4,138	3,893	3,741	3,603	3,772
All other U.S. ....	3,017	3,109	3,280	3,504	3,286	3,184	3,084	3,243
Foreign .....	718	678	584	634	607	557	519	529
Self-support .....	5,195	5,701	6,379	6,443	6,978	7,037	6,725	6,782
<b>Psychology:</b>								
Total, all sources .....	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Federal, total .....	2,492	2,582	2,653	2,634	2,543	2,753	2,722	2,984
Dept. of Defense .....	159	136	163	175	175	139	113	135
Dept. of HHS, total .....	1,342	1,398	1,423	1,365	1,326	1,523	1,465	1,498
NIH .....	901	962	1,163	1,098	1,094	1,218	1,198	1,235
Other HHS .....	441	436	260	267	232	305	267	263
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	21	20	24
NSF .....	268	283	314	289	288	289	278	287
USDA .....	24	19	15	38	16	5	7	8
All other Federal .....	699	746	738	767	738	776	839	1,032
Institutional support .....	12,279	12,676	13,215	12,966	12,841	13,053	13,481	13,428
Other outside support, total .....	1,071	1,108	1,079	1,190	1,133	1,044	1,219	1,363
All other U.S. ....	1,015	1,051	1,032	1,116	1,089	1,003	1,162	1,310
Foreign .....	56	57	47	74	44	41	57	53
Self-support .....	16,416	17,796	17,835	18,498	18,705	18,618	18,185	17,807
<b>Social sciences:</b>								
Total, all sources .....	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Federal, total .....	3,184	3,410	3,491	3,529	3,523	3,247	3,177	3,116
Dept. of Defense .....	247	247	273	267	281	225	203	221
Dept. of HHS, total .....	369	421	417	423	474	327	330	350
NIH .....	268	297	303	286	321	266	262	261
Other HHS .....	101	124	114	137	153	61	68	89
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	52	65	93
NSF .....	560	645	645	675	675	746	687	719
USDA .....	379	392	393	434	428	378	389	347
All other Federal .....	1,629	1,705	1,763	1,730	1,665	1,519	1,503	1,386
Institutional support .....	23,842	24,439	24,645	24,709	25,100	25,444	25,111	25,156
Other outside support, total .....	3,288	3,614	3,561	3,729	3,464	3,543	3,321	3,255
All other U.S. ....	1,833	2,107	2,235	2,353	2,102	2,178	2,052	2,186
Foreign .....	1,455	1,507	1,326	1,376	1,362	1,365	1,269	1,069
Self-support .....	20,317	22,794	23,923	24,305	24,143	24,678	23,879	22,243
<b>Engineering, total:</b>								
Total, all sources .....	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Federal, total .....	15,982	16,564	16,890	16,851	16,361	15,833	15,906	15,659
Dept. of Defense .....	4,871	4,953	5,139	4,717	4,810	4,538	4,804	4,359
Dept. of HHS, total .....	810	901	924	906	918	835	916	981
NIH .....	724	798	794	782	768	731	767	829
Other HHS .....	86	103	130	124	150	104	149	152
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	1,093	1,261	1,243
NSF .....	4,297	4,605	4,561	4,764	4,580	4,593	4,618	4,751
USDA .....	274	358	306	345	341	291	214	183
All other Federal .....	5,730	5,747	5,960	6,119	5,712	4,483	4,093	4,142
Institutional support .....	24,616	24,926	24,959	24,565	23,832	23,392	23,768	23,228
Other outside support, total .....	10,626	10,550	9,717	9,378	9,107	8,874	8,952	9,786
All other U.S. ....	8,536	8,519	8,073	7,766	7,452	7,337	7,545	8,593
Foreign .....	2,090	2,031	1,644	1,612	1,655	1,537	1,407	1,193
Self-support .....	19,810	22,386	22,231	20,772	18,474	17,752	16,960	17,076

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Chemical engineering:</b>								
Total, all sources	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Federal, total	1,598	1,654	1,748	1,716	1,752	1,786	1,649	1,695
Dept. of Defense	134	123	139	128	164	169	169	161
Dept. of HHS, total	132	166	141	173	163	162	137	149
NIH	128	146	119	143	136	148	121	119
Other HHS	4	20	22	30	27	14	16	30
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	91	80	98
NSF	664	699	730	749	759	777	708	760
USDA	16	38	52	54	66	34	25	25
All other Federal	652	628	686	612	600	553	530	502
Institutional support	2,282	2,308	2,340	2,420	2,278	2,154	2,229	2,113
Other outside support, total	1,228	1,170	1,059	1,145	1,080	1,113	1,127	939
All other U.S.	1,111	1,072	960	1,041	942	957	947	826
Foreign	117	98	99	104	138	156	180	113
Self-support	680	814	894	824	847	856	779	854
<b>Civil engineering:</b>								
Total, all sources	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Federal, total	1,752	2,028	1,982	2,090	1,970	1,886	1,807	1,687
Dept. of Defense	273	349	328	321	290	215	232	192
Dept. of HHS, total	35	43	38	45	41	39	47	58
NIH	31	38	30	37	31	33	41	47
Other HHS	4	5	8	8	10	6	6	11
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	117	121	61
NSF	498	532	522	587	530	534	529	547
USDA	51	80	63	65	53	70	40	28
All other Federal	895	1,024	1,031	1,072	1,056	911	838	801
Institutional support	4,204	4,391	4,579	4,742	4,874	4,754	4,685	4,537
Other outside support, total	1,339	1,477	1,267	1,233	1,163	1,154	1,079	1,098
All other U.S.	918	1,031	972	942	875	911	859	919
Foreign	421	446	295	291	288	243	220	179
Self-support	4,033	4,558	4,630	4,576	4,241	3,997	3,697	3,724
<b>Electrical engineering:</b>								
Total, all sources	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Federal, total	3,866	4,061	4,106	4,082	4,057	3,985	4,428	4,397
Dept. of Defense	1,644	1,700	1,764	1,664	1,706	1,651	1,969	1,839
Dept. of HHS, total	85	90	103	100	113	93	118	132
NIH	76	81	86	83	84	71	71	104
Other HHS	9	9	17	17	29	22	47	28
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	173	229	242
NSF	1,278	1,388	1,285	1,343	1,325	1,319	1,351	1,317
USDA	18	24	11	24	34	13	15	12
All other Federal	841	859	943	951	879	736	746	855
Institutional support	6,640	6,856	6,726	6,407	6,245	6,391	6,760	6,509
Other outside support, total	3,024	2,953	2,773	2,620	2,591	2,648	2,727	3,151
All other U.S.	2,492	2,450	2,336	2,218	2,162	2,263	2,390	2,852
Foreign	532	503	437	402	429	385	337	299
Self-support	6,374	7,126	6,765	6,303	5,294	4,965	5,012	5,733
<b>Industrial engineering:</b>								
Total, all sources	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Federal, total	705	650	647	637	657	644	603	602
Dept. of Defense	281	267	249	178	189	209	193	181
Dept. of HHS, total	52	53	78	50	54	49	36	45
NIH	16	22	36	28	27	27	30	38
Other HHS	36	31	42	22	27	22	6	7
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	27	23	32
NSF	188	165	173	215	173	171	145	176
USDA	5	5	3	1	0	1	1	4
All other Federal	179	160	144	193	241	187	205	164
Institutional support	1,858	1,878	1,949	1,889	1,840	1,782	1,697	1,721
Other outside support, total	496	568	493	551	498	461	503	552
All other U.S.	362	430	404	458	420	355	406	454
Foreign	134	138	89	93	78	106	97	98
Self-support	2,539	2,985	2,813	2,833	2,347	2,241	2,272	2,067

See explanatory information, if any, and SOURCE at end of table.

**Table 24. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Mechanical engineering:</b>								
Total, all sources .....	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Federal, total .....	2,730	2,790	2,999	2,946	2,777	2,602	2,626	2,620
Dept. of Defense .....	738	730	797	782	823	739	766	728
Dept. of HHS, total .....	71	87	86	80	93	76	109	112
NIH .....	58	77	70	71	82	63	70	79
Other HHS .....	13	10	16	9	11	13	39	33
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	210	291	290
NSF .....	732	786	812	800	743	770	841	913
USDA .....	29	26	9	10	4	13	12	5
All other Federal .....	1,160	1,161	1,295	1,274	1,114	794	607	572
Institutional support .....	4,287	4,400	4,231	4,086	3,909	3,954	3,913	3,821
Other outside support, total .....	1,686	1,618	1,561	1,573	1,601	1,459	1,460	1,606
All other U.S. ....	1,415	1,401	1,391	1,333	1,347	1,250	1,286	1,462
Foreign .....	271	217	170	240	254	209	174	144
Self-support .....	2,984	3,575	3,604	3,270	2,841	2,675	2,433	2,026
<b>Other engineering:</b>								
Total, all sources .....	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Federal, total .....	5,331	5,381	5,408	5,380	5,148	4,930	4,793	4,658
Dept. of Defense .....	1,801	1,784	1,862	1,644	1,638	1,555	1,475	1,258
Dept. of HHS, total .....	435	462	478	458	454	416	469	485
NIH .....	415	434	453	420	408	389	434	442
Other HHS .....	20	28	25	38	46	27	35	43
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	475	517	520
NSF .....	937	1,035	1,039	1,070	1,050	1,022	1,044	1,038
USDA .....	155	185	168	191	184	160	121	109
All other Federal .....	2,003	1,915	1,861	2,017	1,822	1,302	1,167	1,248
Institutional support .....	5,345	5,093	5,134	5,021	4,686	4,357	4,484	4,527
Other outside support, total .....	2,853	2,764	2,564	2,256	2,174	2,039	2,056	2,440
All other U.S. ....	2,238	2,135	2,010	1,774	1,706	1,601	1,657	2,080
Foreign .....	615	629	554	482	468	438	399	360
Self-support .....	3,200	3,328	3,525	2,966	2,904	3,018	2,767	2,672
<b>Total, health fields:</b>								
Total, all sources .....	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Federal, total .....	6,968	7,328	7,295	7,777	7,902	7,395	7,758	7,961
Dept. of Defense .....	417	399	435	382	333	331	320	307
Dept. of HHS, total .....	5,021	5,154	5,211	5,532	5,677	5,457	5,747	5,894
NIH .....	1,846	2,050	2,266	2,345	2,439	2,447	2,793	2,888
Other HHS .....	3,175	3,104	2,945	3,187	3,238	3,010	2,954	3,006
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	14	21	26
NSF .....	56	70	89	117	100	82	103	134
USDA .....	60	69	78	74	55	50	42	48
All other Federal .....	1,414	1,636	1,482	1,672	1,737	1,461	1,525	1,552
Institutional support .....	7,480	7,647	8,120	8,461	8,980	9,371	9,665	10,075
Other outside support, total .....	1,521	1,694	1,743	1,865	2,026	2,025	1,969	2,170
All other U.S. ....	1,060	1,234	1,300	1,407	1,496	1,595	1,483	1,758
Foreign .....	461	460	443	458	530	430	486	412
Self-support .....	13,897	15,430	18,491	20,978	22,987	25,468	26,949	27,886

<sup>1</sup> Data for NASA were not collected separately prior to 1996.

**KEY:** N/A = Not applicable

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 25. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary mechanism of support: 1991-1998**

Field and mechanism support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all surveyed fields:</b>								
Total, all types .....	307,040	322,609	329,679	332,129	329,148	328,453	327,049	327,609
Fellowships .....	26,695	28,630	29,132	28,894	28,891	28,863	28,942	29,099
Traineeships .....	15,417	15,375	15,458	15,692	15,953	15,488	14,487	14,884
Research assistantships .....	85,175	88,030	90,156	92,011	89,950	87,695	88,055	88,240
Teaching assistantships .....	65,229	65,725	67,315	66,869	65,997	65,789	65,467	65,309
Other types of support .....	114,524	124,849	127,618	128,663	128,357	130,618	130,098	130,077
<b>Total, science and engineering:</b>								
Total, all types .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Fellowships .....	24,983	26,750	27,142	26,774	26,708	26,389	26,475	26,574
Traineeships .....	10,466	10,051	10,296	10,344	10,543	10,338	9,659	9,818
Research assistantships .....	81,214	84,076	86,202	87,633	85,347	83,318	83,143	83,183
Teaching assistantships .....	62,746	63,221	64,792	64,068	63,164	62,768	62,309	62,127
Other types of support .....	97,765	106,412	105,598	104,229	101,491	101,381	99,122	97,815
<b>Sciences, total:</b>								
Total, all types .....	206,140	216,084	220,233	221,482	219,479	218,343	215,122	213,768
Fellowships .....	19,214	20,626	20,905	20,718	20,695	20,720	20,696	21,010
Traineeships .....	9,351	9,042	9,234	9,411	9,534	9,472	8,791	8,971
Research assistantships .....	54,438	56,536	58,271	59,551	58,303	56,805	56,225	55,765
Teaching assistantships .....	51,482	52,274	53,624	53,301	53,004	52,759	52,154	52,051
Other types of support .....	71,655	77,606	78,199	78,501	77,943	78,587	77,256	75,971
<b>Physical sciences:</b>								
Total, all types .....	30,117	30,673	30,611	30,043	28,902	27,956	26,892	26,400
Fellowships .....	2,660	2,837	2,729	2,430	2,351	2,203	2,150	2,113
Traineeships .....	793	707	757	681	677	650	531	482
Research assistantships .....	12,229	12,445	12,293	12,378	11,848	11,527	11,302	11,087
Teaching assistantships .....	11,696	11,848	12,129	11,893	11,696	11,247	10,890	10,843
Other types of support .....	2,739	2,836	2,703	2,661	2,330	2,329	2,019	1,875
<b>Earth, atmospheric, &amp; ocean sciences:</b>								
Total, all types .....	10,373	10,986	11,367	11,470	11,275	10,826	10,550	10,489
Fellowships .....	896	894	907	865	896	870	815	922
Traineeships .....	93	120	153	140	131	131	92	114
Research assistantships .....	4,387	4,615	4,729	4,857	4,659	4,303	4,276	4,120
Teaching assistantships .....	2,345	2,450	2,519	2,484	2,508	2,530	2,649	2,561
Other types of support .....	2,652	2,907	3,059	3,124	3,081	2,992	2,718	2,772
<b>Mathematical sciences:</b>								
Total, all types .....	14,256	14,679	14,530	14,226	13,410	12,966	12,144	11,782
Fellowships .....	1,365	1,416	1,363	1,216	1,297	1,285	1,206	1,109
Traineeships .....	207	220	258	244	222	179	179	164
Research assistantships .....	1,356	1,410	1,436	1,534	1,451	1,296	1,389	1,216
Teaching assistantships .....	7,766	7,739	7,586	7,634	7,293	7,127	6,699	6,588
Other types of support .....	3,562	3,894	3,887	3,598	3,147	3,079	2,671	2,705
<b>Computer sciences:</b>								
Total, all types .....	16,516	17,486	17,374	16,674	16,490	17,173	18,334	19,737
Fellowships .....	901	884	808	908	911	930	940	1,011
Traineeships .....	135	148	229	281	227	210	224	219
Research assistantships .....	3,565	3,682	3,802	3,903	3,918	3,978	4,043	4,295
Teaching assistantships .....	3,503	3,548	3,594	3,374	3,373	3,381	3,647	3,780
Other types of support .....	8,412	9,224	8,941	8,208	8,061	8,674	9,480	10,432
<b>Agricultural sciences:</b>								
Total, all types .....	9,289	9,452	9,468	9,492	9,620	9,298	9,110	9,000
Fellowships .....	491	505	532	522	492	455	470	479
Traineeships .....	130	130	171	132	146	137	129	115
Research assistantships .....	5,002	5,174	5,239	5,385	5,377	5,172	5,088	4,978
Teaching assistantships .....	782	791	887	886	939	943	961	1,017
Other types of support .....	2,884	2,852	2,639	2,567	2,666	2,591	2,462	2,411
<b>Biological sciences:</b>								
Total, all types .....	42,700	44,389	46,481	48,017	48,330	47,744	46,997	47,008
Fellowships .....	4,688	5,058	5,234	5,523	5,386	5,284	5,487	5,654
Traineeships .....	5,094	4,830	4,918	5,227	5,302	5,342	5,060	5,212
Research assistantships .....	16,846	17,627	18,853	19,438	19,249	18,676	18,610	18,274
Teaching assistantships .....	8,797	8,947	9,163	9,339	9,311	9,361	9,199	9,114
Other types of support .....	7,275	7,927	8,313	8,490	9,082	9,081	8,641	8,754
<b>Psychology:</b>								
Total, all types .....	32,258	34,162	34,782	35,288	35,222	35,468	35,607	35,582
Fellowships .....	1,691	1,858	1,930	1,847	1,844	1,982	2,145	2,339
Traineeships .....	1,194	1,173	1,113	1,044	1,081	1,166	1,067	1,113
Research assistantships .....	4,235	4,304	4,557	4,655	4,585	4,763	4,790	4,814
Teaching assistantships .....	5,750	5,769	6,253	6,058	6,112	6,148	6,165	6,167
Other types of support .....	19,388	21,058	20,929	21,684	21,600	21,409	21,440	21,149

See explanatory information, if any, and SOURCE at end of table.

**Table 25. Full-time graduate students in science, engineering, and health fields in all institutions, by field and primary mechanism of support: 1991-1998**

Field and mechanism support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Social sciences:</b>								
Total, all types .....	50,631	54,257	55,620	56,272	56,230	56,912	55,488	53,770
Fellowships .....	6,522	7,174	7,402	7,407	7,518	7,711	7,483	7,383
Traineeships .....	1,705	1,714	1,635	1,662	1,748	1,657	1,509	1,552
Research assistantships .....	6,818	7,279	7,362	7,401	7,216	7,090	6,727	6,981
Teaching assistantships .....	10,843	11,182	11,493	11,633	11,772	12,022	11,944	11,981
Other types of support .....	24,743	26,908	27,728	28,169	27,976	28,432	27,825	25,873
<b>Engineering, total:</b>								
Total, all types .....	71,034	74,426	73,797	71,566	67,774	65,851	65,586	65,749
Fellowships .....	5,769	6,124	6,237	6,056	6,013	5,669	5,779	5,564
Traineeships .....	1,115	1,009	1,062	933	1,009	866	868	847
Research assistantships .....	26,776	27,540	27,931	28,082	27,044	26,513	26,918	27,418
Teaching assistantships .....	11,264	10,947	11,168	10,767	10,160	10,009	10,155	10,076
Other types of support .....	26,110	28,806	27,399	25,728	23,548	22,794	21,866	21,844
<b>Chemical engineering:</b>								
Total, all types .....	5,788	5,946	6,041	6,105	5,957	5,909	5,784	5,601
Fellowships .....	691	738	719	705	791	763	836	713
Traineeships .....	173	153	123	98	105	93	94	97
Research assistantships .....	2,987	3,012	3,120	3,270	3,104	3,052	2,967	2,892
Teaching assistantships .....	1,006	1,021	1,018	947	909	920	920	895
Other types of support .....	931	1,022	1,061	1,085	1,048	1,081	967	1,004
<b>Civil engineering:</b>								
Total, all types .....	11,328	12,454	12,458	12,641	12,248	11,791	11,268	11,046
Fellowships .....	677	802	904	888	918	884	850	802
Traineeships .....	214	219	210	191	196	178	180	160
Research assistantships .....	3,565	3,936	4,048	4,254	4,225	4,124	3,965	3,853
Teaching assistantships .....	1,667	1,648	1,818	1,901	1,846	1,788	1,769	1,752
Other types of support .....	5,205	5,849	5,478	5,407	5,063	4,817	4,504	4,479
<b>Electrical engineering:</b>								
Total, all types .....	19,904	20,996	20,370	19,412	18,187	17,989	18,927	19,790
Fellowships .....	1,424	1,502	1,475	1,503	1,446	1,388	1,394	1,322
Traineeships .....	187	162	191	158	156	152	122	133
Research assistantships .....	6,556	6,867	6,925	6,855	6,694	6,920	7,552	7,709
Teaching assistantships .....	3,487	3,451	3,435	3,236	3,106	3,163	3,355	3,341
Other types of support .....	8,250	9,014	8,344	7,660	6,785	6,366	6,504	7,285
<b>Industrial engineering:</b>								
Total, all types .....	5,598	6,081	5,902	5,910	5,342	5,128	5,075	4,942
Fellowships .....	260	269	281	270	299	234	239	252
Traineeships .....	32	27	48	32	37	14	21	24
Research assistantships .....	1,249	1,235	1,271	1,342	1,339	1,282	1,264	1,400
Teaching assistantships .....	893	891	935	933	823	784	773	777
Other types of support .....	3,164	3,659	3,367	3,333	2,844	2,814	2,778	2,489
<b>Mechanical engineering:</b>								
Total, all types .....	11,687	12,383	12,395	11,875	11,128	10,690	10,432	10,073
Fellowships .....	868	909	926	943	944	907	846	902
Traineeships .....	179	168	211	187	187	165	215	180
Research assistantships .....	4,630	4,731	4,787	4,688	4,413	4,272	4,349	4,498
Teaching assistantships .....	2,205	2,185	2,255	2,069	1,930	1,860	1,887	1,780
Other types of support .....	3,805	4,390	4,216	3,988	3,654	3,486	3,135	2,713
<b>Other engineering:</b>								
Total, all types .....	16,729	16,566	16,631	15,623	14,912	14,344	14,100	14,297
Fellowships .....	1,849	1,904	1,932	1,747	1,615	1,493	1,614	1,573
Traineeships .....	330	280	279	267	328	264	236	253
Research assistantships .....	7,789	7,759	7,780	7,673	7,269	6,863	6,821	7,066
Teaching assistantships .....	2,006	1,751	1,707	1,681	1,546	1,494	1,451	1,531
Other types of support .....	4,755	4,872	4,933	4,255	4,154	4,230	3,978	3,874
<b>Total, health fields:</b>								
Total, all types .....	29,866	32,099	35,649	39,081	41,895	44,259	46,341	48,092
Fellowships .....	1,712	1,880	1,990	2,120	2,183	2,474	2,467	2,525
Traineeships .....	4,951	5,324	5,162	5,348	5,410	5,150	4,828	5,066
Research assistantships .....	3,961	3,954	3,954	4,378	4,603	4,377	4,912	5,057
Teaching assistantships .....	2,483	2,504	2,523	2,801	2,833	3,021	3,158	3,182
Other types of support .....	16,759	18,437	22,020	24,434	26,866	29,237	30,976	32,262

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 26. Full-time graduate students in science and engineering fields in all institutions,  
by primary mechanism and primary source of support: 1991-1998**

Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all types:</b>								
Total, all sources .....	277,174	290,510	294,030	293,048	287,253	284,194	280,708	279,517
Federal, total .....	56,046	58,298	60,393	60,789	59,408	57,857	56,840	56,148
Dept. of Defense .....	8,711	8,848	9,315	9,067	9,006	8,471	8,732	8,048
Dept. of HHS, total .....	15,472	16,274	16,827	17,148	17,110	16,914	16,813	16,925
NIH .....	14,172	15,043	15,871	15,950	15,672	15,485	15,349	15,444
Other HHS .....	1,300	1,231	956	1,198	1,438	1,429	1,464	1,481
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2,295	2,565	2,619
NSF .....	12,610	13,296	13,441	13,873	13,561	13,330	13,272	13,398
USDA .....	3,015	3,147	3,246	3,348	3,199	2,954	2,604	2,437
All other Federal .....	16,238	16,733	17,564	17,353	16,532	13,893	12,854	12,721
Institutional support .....	117,907	120,276	120,899	120,834	120,417	119,086	119,267	118,815
Other outside support, total .....	25,549	26,075	24,971	25,390	23,926	23,379	23,081	24,169
All other U.S. ....	19,367	20,075	19,933	20,130	18,909	18,559	18,754	20,363
Foreign .....	6,182	6,000	5,038	5,260	5,017	4,820	4,327	3,806
Self-support .....	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385
<b>Fellowships:</b>								
Total, all sources .....	24,983	26,750	27,142	26,774	26,708	26,389	26,475	26,574
Federal, total .....	6,910	7,222	6,998	6,360	6,364	6,434	6,262	6,358
Dept. of Defense .....	677	648	627	523	470	508	522	536
Dept. of HHS, total .....	818	985	1,033	1,048	1,167	1,153	1,231	1,291
NIH .....	722	868	919	917	966	974	1,004	1,063
Other HHS .....	96	117	114	131	201	179	227	228
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	410	373	380
NSF .....	2,233	2,354	2,267	2,275	2,323	2,451	2,309	2,337
USDA .....	102	113	113	112	136	111	138	139
All other Federal .....	3,080	3,122	2,958	2,402	2,268	1,801	1,689	1,675
Institutional support .....	12,314	13,409	13,980	13,928	14,299	14,402	15,241	15,209
Other outside support, total .....	5,759	6,119	6,164	6,486	6,045	5,553	4,972	5,007
All other U.S. ....	3,550	3,798	3,702	4,069	3,813	3,402	3,118	3,302
Foreign .....	2,209	2,321	2,462	2,417	2,232	2,151	1,854	1,705
Self-support .....	N/A							
<b>Traineeships:</b>								
Total, all sources .....	10,466	10,051	10,296	10,344	10,543	10,338	9,659	9,818
Federal, total .....	5,454	5,551	5,773	5,857	5,630	5,515	5,143	5,433
Dept. of Defense .....	116	94	113	122	104	124	108	64
Dept. of HHS, total .....	4,384	4,387	4,378	4,493	4,347	4,256	3,977	4,234
NIH .....	4,084	4,106	4,194	4,206	3,990	3,990	3,793	4,056
Other HHS .....	300	281	184	287	357	266	184	178
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	67	76	58
NSF .....	80	104	165	258	338	431	383	407
USDA .....	34	28	42	37	18	24	23	14
All other Federal .....	840	938	1,075	947	823	613	576	656
Institutional support .....	4,275	3,712	3,635	3,606	4,214	4,254	3,877	3,682
Other outside support, total .....	737	788	888	881	699	569	639	703
All other U.S. ....	552	581	594	660	504	385	488	570
Foreign .....	185	207	294	221	195	184	151	133
Self-support .....	N/A							
<b>Research assistantships:</b>								
Total, all sources .....	81,214	84,076	86,202	87,633	85,347	83,318	83,143	83,183
Federal, total .....	39,352	41,075	43,029	43,895	42,936	41,826	41,510	40,042
Dept. of Defense .....	5,452	5,703	6,204	6,177	6,261	5,965	6,339	5,816
Dept. of HHS, total .....	9,958	10,473	10,976	11,233	11,166	11,035	11,098	10,619
NIH .....	9,099	9,700	10,386	10,518	10,368	10,154	10,146	9,633
Other HHS .....	859	773	590	715	798	881	952	986
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	1,775	2,059	2,120
NSF .....	10,144	10,628	10,769	11,145	10,600	10,223	10,399	10,374
USDA .....	2,761	2,896	2,964	3,073	2,946	2,707	2,371	2,192
All other Federal .....	11,037	11,375	12,116	12,267	11,963	10,121	9,244	8,921
Institutional support .....	29,426	29,953	29,900	30,639	30,152	29,175	29,014	29,835
Other outside support, total .....	12,436	13,048	13,273	13,099	12,259	12,317	12,619	13,306
All other U.S. ....	11,630	12,237	12,415	12,336	11,519	11,578	11,879	12,679
Foreign .....	806	811	858	763	740	739	740	627
Self-support .....	N/A							

See explanatory information, if any, and SOURCE at end of table.

**Table 26. Full-time graduate students in science and engineering fields in all institutions,  
by primary mechanism and primary source of support: 1991-1998**

Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Teaching assistantships:</b>								
Total, all sources .....	62,746	63,221	64,792	64,068	63,164	62,768	62,309	62,127
Federal, total .....	428	574	776	677	646	741	789	984
Dept. of Defense .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dept. of HHS, total .....	87	166	162	136	113	180	157	232
NIH .....	74	149	156	127	106	176	127	221
Other HHS .....	13	17	6	9	7	4	30	11
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2	24	23
NSF .....	73	112	140	107	157	117	81	130
USDA .....	33	28	46	49	37	42	30	37
All other Federal .....	235	268	428	385	339	400	497	562
Institutional support .....	61,810	62,106	63,432	62,781	61,980	61,405	60,928	60,528
Other outside support, total .....	508	541	584	610	538	622	592	615
All other U.S. ....	508	541	584	610	538	622	592	615
Foreign .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-support .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other types of support:</b>								
Total, all sources .....	97,765	106,412	105,598	104,229	101,491	101,381	99,122	97,815
Federal, total .....	3,902	3,876	3,817	4,000	3,832	3,341	3,136	3,331
Dept. of Defense .....	2,466	2,403	2,371	2,245	2,171	1,874	1,763	1,632
Dept. of HHS, total .....	225	263	278	238	317	290	350	549
NIH .....	193	220	216	182	242	191	279	471
Other HHS .....	32	43	62	56	75	99	71	78
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	41	33	38
NSF .....	80	98	100	88	143	108	100	150
USDA .....	85	82	81	77	62	70	42	55
All other Federal .....	1,046	1,030	987	1,352	1,139	958	848	907
Institutional support .....	10,082	11,096	9,952	9,880	9,772	9,850	10,207	9,561
Other outside support, total .....	6,109	5,579	4,062	4,314	4,385	4,318	4,259	4,538
All other U.S. ....	3,127	2,918	2,638	2,455	2,535	2,572	2,677	3,197
Foreign .....	2,982	2,661	1,424	1,859	1,850	1,746	1,582	1,341
Self-support .....	77,672	85,861	87,767	86,035	83,502	83,872	81,520	80,385

<sup>1</sup> Data for NASA were not collected separately prior to 1996.

**KEY:** N/A = Not applicable

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 27. Full-time students in graduate school for the first time in science, engineering, and health fields in all institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	93,172	95,832	92,798	92,221	89,445	88,953	89,033	90,868
Total, science and engineering fields .....	81,458	83,134	79,313	78,056	74,384	73,479	73,544	74,431
Sciences, total .....	58,914	60,890	58,975	58,287	56,310	55,472	54,737	55,195
Physical sciences, total .....	7,107	6,910	6,690	6,454	6,131	6,019	6,035	5,945
Astronomy .....	153	161	153	164	147	157	125	162
Chemistry .....	4,088	3,910	3,842	3,813	3,712	3,707	3,764	3,689
Physics .....	2,820	2,773	2,642	2,381	2,188	2,088	2,074	2,046
Physical sciences, n.e.c. ....	46	66	53	96	84	67	72	48
Earth, atmos., & ocean sci., total .....	2,909	3,018	2,987	3,012	2,805	2,640	2,693	2,881
Atmospheric sciences .....	224	235	214	224	198	213	224	189
Geosciences .....	1,506	1,506	1,506	1,522	1,427	1,328	1,349	1,349
Oceanography .....	472	501	487	518	418	370	408	470
Earth, atmos., & ocean sci., n.e.c. ....	707	776	780	748	762	729	712	873
Mathematical sciences .....	4,350	4,443	4,044	3,963	3,578	3,450	3,302	3,338
Computer sciences .....	5,558	5,477	4,741	4,754	4,782	4,908	5,019	5,753
Agricultural sciences .....	2,434	2,219	2,301	2,301	2,240	2,122	2,103	2,252
Biological sciences, total .....	10,676	10,890	11,114	11,376	11,417	10,832	11,108	11,407
Anatomy .....	248	231	199	222	252	260	214	213
Biochemistry .....	1,034	1,027	1,089	1,034	981	945	994	1,021
Biology .....	2,709	2,789	2,752	2,733	2,688	2,574	2,671	2,483
Biometry/epidemiology .....	461	603	667	657	738	671	661	813
Biophysics .....	157	145	143	149	153	155	133	158
Botany .....	548	548	517	483	443	443	415	449
Cell biology .....	608	655	697	761	717	743	800	864
Ecology .....	190	212	250	285	308	245	247	259
Entomology/parasitology .....	230	216	239	206	184	202	194	233
Genetics .....	312	296	342	345	344	387	436	395
Microbio., immunology, & virology .....	900	873	845	906	910	848	871	856
Nutrition .....	818	764	836	795	854	825	789	937
Pathology .....	274	268	324	334	296	291	350	279
Pharmacology .....	542	550	513	530	498	420	454	509
Physiology .....	596	589	616	649	811	725	633	654
Zoology .....	464	393	379	348	356	327	326	280
Biosciences, n.e.c. ....	585	731	706	939	884	771	920	1,004
Psychology .....	9,457	10,172	9,686	9,530	9,241	9,152	8,803	8,645
Social sciences, total .....	16,423	17,761	17,412	16,897	16,116	16,349	15,674	14,974
Agricultural economics .....	623	683	570	533	492	436	467	417
Anthropology (cultural & social) .....	1,271	1,289	1,309	1,331	1,247	1,252	1,196	1,219
Economics (except agricultural) .....	2,893	3,007	2,837	2,793	2,605	2,466	2,368	2,352
Geography .....	827	886	999	959	836	870	914	805
Linguistics .....	675	650	611	612	594	620	563	485
Political science .....	6,121	6,714	6,567	6,131	5,916	5,842	5,264	4,946
Sociology .....	1,550	1,774	1,732	1,548	1,503	1,505	1,525	1,437
Sociology/anthropology .....	160	202	200	229	147	210	171	177
Social sciences, other .....	2,303	2,556	2,587	2,761	2,776	3,148	3,206	3,136
Engineering, total .....	22,544	22,244	20,338	19,769	18,074	18,007	18,807	19,236
Aerospace engineering .....	1,125	1,053	963	793	650	687	735	717
Agricultural engineering .....	207	193	161	193	177	183	165	155
Biomedical engineering .....	516	599	601	566	592	572	671	677
Chemical engineering .....	1,517	1,480	1,520	1,461	1,418	1,470	1,462	1,496
Civil engineering .....	4,210	4,331	4,019	4,194	3,825	3,845	3,748	3,741
Electrical engineering .....	6,243	6,112	5,485	5,452	4,975	4,859	5,513	5,726
Engineering science .....	312	347	316	313	275	273	274	308
Industrial/manufacturing eng. ....	2,045	1,926	1,647	1,721	1,523	1,591	1,532	1,528
Mechanical engineering .....	3,771	3,820	3,514	3,218	2,832	2,785	2,829	2,923
Metallurgical/materials eng. ....	997	997	871	842	805	777	850	886
Nuclear engineering .....	260	283	258	208	187	182	178	153
Engineering, other .....	1,341	1,103	983	808	815	783	850	926
Total, health fields .....	11,714	12,698	13,485	14,165	15,061	15,474	15,489	16,437
Clinical fields .....	787	836	795	780	811	885	1,018	890
Dental sciences .....	339	410	421	405	373	386	377	400
Nursing .....	2,407	2,391	2,420	2,615	2,685	2,653	2,871	2,830
Pharmaceutical sciences .....	557	480	481	489	463	521	490	588
Preventive medicine/community health .....	1,939	2,146	2,299	2,204	2,587	2,300	2,133	2,626
Speech pathology/audiology .....	2,897	3,187	3,328	3,519	3,615	3,911	3,830	4,075
Veterinary sciences .....	152	155	138	158	157	119	128	189
Other health fields .....	2,636	3,093	3,603	3,995	4,370	4,699	4,642	4,839

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 28. Graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields .....	485,754	24,249	2,050	31,709	18,879	279,041	22,777	107,049
Total, science and engineering fields .....	405,280	19,653	1,614	26,844	15,595	220,700	18,898	101,976
Sciences, total .....	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
Physical sciences, total .....	30,565	910	64	1,760	831	15,197	1,050	10,753
Astronomy .....	820	9	2	32	12	507	45	213
Chemistry .....	18,454	632	46	1,179	561	9,454	551	6,031
Physics .....	10,809	242	14	528	226	4,967	402	4,430
Physical sciences, n.e.c. ....	482	27	2	21	32	269	52	79
Earth, atmos., & ocean sci., total .....	14,364	206	85	425	390	10,175	581	2,502
Atmospheric sciences .....	965	8	2	55	13	601	31	255
Geosciences .....	6,705	59	36	153	154	4,774	285	1,244
Oceanography .....	2,545	25	16	62	106	1,720	83	533
Earth, atmos., & ocean sci., n.e.c. ....	4,149	114	31	155	117	3,080	182	470
Mathematical sciences, total .....	16,463	613	34	1,174	454	8,081	692	5,415
Mathematics & applied mathematics .....	13,816	562	30	937	404	6,887	614	4,382
Statistics .....	2,647	51	4	237	50	1,194	78	1,033
Computer sciences .....	37,850	1,352	93	5,278	754	13,937	2,279	14,157
Agricultural sciences .....	11,811	310	69	304	383	7,857	294	2,594
Biological sciences, total .....	57,060	2,186	192	4,426	2,057	34,553	2,214	11,432
Anatomy .....	1,015	41	3	81	15	634	37	204
Biochemistry .....	5,138	143	13	529	159	2,731	129	1,434
Biology .....	14,257	742	51	822	685	9,081	777	2,099
Biometry/epidemiology .....	3,484	181	6	357	153	1,883	227	677
Biophysics .....	737	18	1	90	14	377	71	166
Botany .....	2,328	59	3	92	56	1,381	64	673
Cell biology .....	4,079	113	11	423	120	2,446	121	845
Ecology .....	1,696	21	5	50	43	1,348	58	171
Entomology/parasitology .....	1,168	11	3	37	26	778	22	291
Genetics .....	1,705	43	4	126	51	1,055	32	394
Microbio., immunology, & virology .....	4,824	174	19	439	185	2,874	144	989
Nutrition .....	4,431	213	16	247	168	2,628	92	1,067
Pathology .....	1,580	44	10	166	42	961	69	288
Pharmacology .....	2,713	136	6	297	88	1,557	57	572
Physiology .....	2,169	95	10	265	70	1,238	53	438
Zoology .....	1,676	17	9	62	36	1,283	73	196
Biosciences, n.e.c. ....	4,060	135	22	343	146	2,298	188	928
Psychology, total .....	53,055	3,845	315	2,038	3,315	37,886	3,462	2,194
Psychology, general .....	17,559	1,524	94	709	975	12,654	882	721
Clinical psychology .....	12,839	711	113	559	1,121	9,412	559	364
Psychology, n.e.c. ....	22,657	1,610	108	770	1,219	15,820	2,021	1,109
Social sciences, total .....	83,825	7,404	525	3,379	4,499	49,023	4,111	14,884
Agricultural economics .....	1,995	70	5	54	42	860	60	904
Anthropology (cultural & social) .....	7,577	266	119	241	344	5,549	319	739
Economics (except agricultural) .....	10,699	317	16	611	276	3,818	413	5,248
Geography .....	4,325	108	13	101	98	3,210	250	545
History and philosophy of science .....	518	12	1	23	12	387	16	67
Linguistics .....	2,883	46	9	184	150	1,358	116	1,020
Political science .....	30,680	3,751	173	1,182	1,980	18,452	1,598	3,544
Sociology .....	9,098	1,114	68	406	602	5,494	305	1,109
Sociology/anthropology .....	857	99	8	9	41	523	67	110
Social sciences, n.e.c. ....	15,193	1,621	113	568	954	9,372	967	1,598
Engineering, total .....	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
Aerospace engineering .....	3,137	34	7	140	76	1,391	72	1,417
Agricultural engineering .....	925	27	4	43	15	403	27	406
Biomedical engineering .....	2,905	86	7	268	80	1,623	113	728
Chemical engineering .....	7,060	185	21	469	179	3,105	230	2,871
Civil engineering .....	16,374	410	43	1,094	722	8,584	609	4,912
Electrical engineering .....	31,398	868	33	3,509	815	10,622	1,501	14,050
Engineering science .....	1,701	39	7	187	42	843	31	552
Industrial/manufacturing eng. ....	11,059	455	30	595	355	5,643	593	3,388
Mechanical engineering .....	14,696	412	25	973	389	6,636	611	5,650
Metallurgical/materials eng. ....	4,644	74	33	272	84	2,053	127	2,001
Mining engineering .....	304	1	0	57	4	151	15	76
Nuclear engineering .....	821	13	2	36	22	449	5	294
Petroleum engineering .....	571	5	2	7	6	101	2	448
Engineering, n.e.c. ....	4,692	218	23	410	123	2,387	279	1,252

See explanatory information, if any, and SOURCE at end of table.

**Table 28. Graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields .....	80,474	4,596	436	4,865	3,284	58,341	3,879	5,073
Medical fields, total .....	16,341	1,312	101	1,852	927	9,550	892	1,707
Anesthesiology .....	907	40	4	21	11	631	191	9
Cardiology .....	51	0	0	9	2	25	0	15
Oncology/cancer research .....	209	8	1	44	7	115	3	31
Endocrinology .....	58	2	0	16	2	19	2	17
Gastroenterology .....	6	0	0	1	1	2	2	0
Hematology .....	1	0	0	0	0	1	0	0
Neurology .....	1,765	47	11	194	76	1,161	43	233
Obstetrics and gynecology .....	13	0	0	1	0	12	0	0
Ophthalmology .....	38	0	0	4	0	11	0	23
Otorhinolaryngology .....	0	0	0	0	0	0	0	0
Pediatrics .....	314	28	8	27	9	195	19	28
Preventive medicine/community health .....	11,142	1,112	69	1,251	749	6,280	474	1,207
Psychiatry .....	136	7	1	6	3	117	1	1
Pulmonary disease .....	0	0	0	0	0	0	0	0
Radiology .....	249	6	0	30	15	161	3	34
Surgery .....	174	4	1	22	4	134	3	6
Clinical medicine, n.e.c. ....	1,278	58	6	226	48	686	151	103
Other health fields, total .....	64,133	3,284	335	3,013	2,357	48,791	2,987	3,366
Dental sciences .....	1,471	34	1	144	120	811	19	342
Nursing .....	25,499	1,500	172	977	814	20,172	1,397	467
Pharmaceutical sciences .....	3,407	200	9	319	137	1,439	118	1,185
Speech pathology/audiology .....	13,315	547	59	262	469	11,074	506	398
Veterinary sciences .....	1,192	44	7	47	29	779	7	279
Health related, n.e.c. ....	19,249	959	87	1,264	788	14,516	940	695

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 29. Male graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields .....	261,240	9,262	898	17,658	8,786	138,238	11,940	74,458
Total, science and engineering fields .....	241,828	8,347	802	16,003	7,891	125,822	11,004	71,959
Sciences, total .....	160,615	6,406	628	9,821	5,669	89,942	7,546	40,603
Physical sciences, total .....	21,831	479	41	1,150	524	11,035	759	7,843
Astronomy .....	590	6	1	17	10	362	30	164
Chemistry .....	11,911	301	28	694	314	6,287	368	3,919
Physics .....	9,029	159	10	432	183	4,208	325	3,712
Physical sciences, n.e.c. ....	301	13	2	7	17	178	36	48
Earth, atmos., & ocean sci., total .....	8,733	105	45	238	209	6,063	334	1,739
Atmospheric sciences .....	731	5	2	38	11	493	15	167
Geosciences .....	4,379	35	18	96	88	3,024	168	950
Oceanography .....	1,393	10	9	36	47	898	42	351
Earth, atmos., & ocean sci., n.e.c. ....	2,230	55	16	68	63	1,648	109	271
Mathematical sciences .....	10,483	339	16	702	276	5,045	467	3,638
Computer sciences .....	27,206	768	68	3,387	560	10,787	1,633	10,003
Agricultural sciences .....	7,112	147	44	155	208	4,630	161	1,767
Biological sciences, total .....	28,003	791	88	2,094	932	17,022	1,128	5,948
Anatomy .....	551	19	1	46	11	324	21	129
Biochemistry .....	2,913	67	9	285	84	1,593	70	805
Biology .....	7,070	262	24	367	314	4,623	409	1,071
Biometry/epidemiology .....	1,343	59	2	111	48	696	87	340
Biophysics .....	528	10	0	72	13	266	46	121
Botany .....	1,210	29	1	39	27	711	31	372
Cell biology .....	2,091	52	4	205	60	1,276	58	436
Ecology .....	862	12	2	21	23	672	33	99
Entomology/parasitology .....	754	5	1	20	18	487	12	211
Genetics .....	735	14	1	61	24	422	14	199
Microbio., immunology, & virology .....	2,428	63	9	206	82	1,477	76	515
Nutrition .....	1,069	43	3	56	27	547	29	364
Pathology .....	776	14	7	84	19	460	37	155
Pharmacology .....	1,398	51	2	149	43	830	31	292
Physiology .....	1,275	37	5	168	43	738	30	254
Zoology .....	941	6	6	32	18	719	43	117
Biosciences, n.e.c. ....	2,059	48	11	172	78	1,181	101	468
Psychology .....	15,314	920	90	554	909	11,028	1,009	804
Social sciences, total .....	41,933	2,857	236	1,541	2,051	24,332	2,055	8,861
Agricultural economics .....	1,315	45	2	29	21	565	39	614
Anthropology (cultural & social) .....	3,021	82	49	74	149	2,190	125	352
Economics (except agricultural) .....	7,239	191	11	386	178	2,594	286	3,593
Geography .....	2,662	65	8	53	64	1,971	162	339
Linguistics .....	976	14	2	54	33	464	42	367
Political science .....	15,833	1,441	89	549	901	9,873	854	2,126
Sociology .....	3,366	387	23	144	243	1,949	109	511
Sociology/anthropology .....	335	42	7	2	17	194	26	47
Social sciences, other .....	7,186	590	45	250	445	4,532	412	912
Engineering, total .....	81,213	1,941	174	6,182	2,222	35,880	3,458	31,356
Aerospace engineering .....	2,755	27	7	119	67	1,216	60	1,259
Agricultural engineering .....	682	17	2	30	10	300	19	304
Biomedical engineering .....	2,035	42	5	182	53	1,140	79	534
Chemical engineering .....	5,339	105	13	321	114	2,403	176	2,207
Civil engineering .....	12,294	277	31	781	503	6,397	446	3,859
Electrical engineering .....	26,562	675	25	2,766	692	9,455	1,276	11,673
Engineering science .....	1,370	32	6	143	30	693	25	441
Industrial eng./manufacturing eng. ....	8,664	249	20	448	241	4,402	489	2,815
Mechanical engineering .....	12,934	308	20	835	332	5,849	549	5,041
Metallurgical/materials eng. ....	3,529	43	27	197	54	1,558	98	1,552
Nuclear engineering .....	687	9	1	28	18	378	5	248
Engineering, other .....	4,362	157	17	332	108	2,089	236	1,423

See explanatory information, if any, and SOURCE at end of table.

**Table 29. Male graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields .....	19,412	915	96	1,655	895	12,416	936	2,499
Clinical fields .....	1,611	60	4	224	52	921	216	134
Dental sciences .....	919	17	1	82	66	535	9	209
Nursing .....	2,129	81	18	76	129	1,671	107	47
Pharmaceutical sciences .....	1,690	77	1	150	40	725	59	638
Preventive medicine/community health .....	4,069	308	28	470	243	2,152	183	685
Speech pathology/audiology .....	1,094	47	7	33	47	809	45	106
Veterinary sciences .....	564	19	2	26	17	317	5	178
Other health fields .....	7,336	306	35	594	301	5,286	312	502

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 30. Female graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields .....	224,514	14,987	1,152	14,051	10,093	140,803	10,837	32,591
Total, science and engineering fields .....	163,452	11,306	812	10,841	7,704	94,878	7,894	30,017
Sciences, total .....	144,378	10,420	749	8,963	7,014	86,767	7,137	23,328
Physical sciences, total .....	8,734	431	23	610	307	4,162	291	2,910
Astronomy .....	230	3	1	15	2	145	15	49
Chemistry .....	6,543	331	18	485	247	3,167	183	2,112
Physics .....	1,780	83	4	96	43	759	77	718
Physical sciences, n.e.c. ....	181	14	0	14	15	91	16	31
Earth, atmos., & ocean sci., total .....	5,631	101	40	187	181	4,112	247	763
Atmospheric sciences .....	234	3	0	17	2	108	16	88
Geosciences .....	2,326	24	18	57	66	1,750	117	294
Oceanography .....	1,152	15	7	26	59	822	41	182
Earth, atmos., & ocean sci., n.e.c. ....	1,919	59	15	87	54	1,432	73	199
Mathematical sciences .....	5,980	274	18	472	178	3,036	225	1,777
Computer sciences .....	10,644	584	25	1,891	194	3,150	646	4,154
Agricultural sciences .....	4,699	163	25	149	175	3,227	133	827
Biological sciences, total .....	29,057	1,395	104	2,332	1,125	17,531	1,086	5,484
Anatomy .....	464	22	2	35	4	310	16	75
Biochemistry .....	2,225	76	4	244	75	1,138	59	629
Biology .....	7,187	480	27	455	371	4,458	368	1,028
Biometry/epidemiology .....	2,141	122	4	246	105	1,187	140	337
Biophysics .....	209	8	1	18	1	111	25	45
Botany .....	1,118	30	2	53	29	670	33	301
Cell biology .....	1,988	61	7	218	60	1,170	63	409
Ecology .....	834	9	3	29	20	676	25	72
Entomology/parasitology .....	414	6	2	17	8	291	10	80
Genetics .....	970	29	3	65	27	633	18	195
Microbio., immunology, & virology .....	2,396	111	10	233	103	1,397	68	474
Nutrition .....	3,362	170	13	191	141	2,081	63	703
Pathology .....	804	30	3	82	23	501	32	133
Pharmacology .....	1,315	85	4	148	45	727	26	280
Physiology .....	894	58	5	97	27	500	23	184
Zoology .....	735	11	3	30	18	564	30	79
Biosciences, n.e.c. ....	2,001	87	11	171	68	1,117	87	460
Psychology .....	37,741	2,925	225	1,484	2,406	26,858	2,453	1,390
Social sciences, total .....	41,892	4,547	289	1,838	2,448	24,691	2,056	6,023
Agricultural economics .....	680	25	3	25	21	295	21	290
Anthropology (cultural & social) .....	4,556	184	70	167	195	3,359	194	387
Economics (except agricultural) .....	3,460	126	5	225	98	1,224	127	1,655
Geography .....	1,663	43	5	48	34	1,239	88	206
Linguistics .....	1,907	32	7	130	117	894	74	653
Political science .....	14,847	2,310	84	633	1,079	8,579	744	1,418
Sociology .....	5,732	727	45	262	359	3,545	196	598
Sociology/anthropology .....	522	57	1	7	24	329	41	63
Social sciences, other .....	8,525	1,043	69	341	521	5,227	571	753
Engineering, total .....	19,074	886	63	1,878	690	8,111	757	6,689
Aerospace engineering .....	382	7	0	21	9	175	12	158
Agricultural engineering .....	243	10	2	13	5	103	8	102
Biomedical engineering .....	870	44	2	86	27	483	34	194
Chemical engineering .....	1,721	80	8	148	65	702	54	664
Civil engineering .....	4,080	133	12	313	219	2,187	163	1,053
Electrical engineering .....	4,836	193	8	743	123	1,167	225	2,377
Engineering science .....	331	7	1	44	12	150	6	111
Industrial eng./manufacturing eng. ....	2,395	206	10	147	114	1,241	104	573
Mechanical engineering .....	1,762	104	5	138	57	787	62	609
Metallurgical/materials eng. ....	1,115	31	6	75	30	495	29	449
Nuclear engineering .....	134	4	1	8	4	71	0	46
Engineering, other .....	1,205	67	8	142	25	550	60	353

See explanatory information, if any, and SOURCE at end of table.

**Table 30. Female graduate students in science, engineering, and health fields in all institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields .....	61,062	3,681	340	3,210	2,389	45,925	2,943	2,574
Clinical fields .....	1,823	93	17	183	50	1,188	159	133
Dental sciences .....	552	17	0	62	54	276	10	133
Nursing .....	23,370	1,419	154	901	685	18,501	1,290	420
Pharmaceutical sciences .....	1,717	123	8	169	97	714	59	547
Preventive medicine/community health .....	7,073	804	41	781	506	4,128	291	522
Speech pathology/audiology .....	12,221	500	52	229	422	10,265	461	292
Veterinary sciences .....	628	25	5	21	12	462	2	101
Other health fields .....	13,678	700	63	864	563	10,391	671	426

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions .....	304,993	16,826	1,377	18,784	12,683	176,709	14,683	63,931
New England .....	21,584	534	74	1,131	499	11,612	1,618	6,116
Connecticut .....	5,074	145	8	227	127	2,859	285	1,423
Central Connecticut State University .....	54	2	0	2	2	40	3	5
Connecticut College .....	25	0	0	1	0	24	0	0
Quinnipiac College .....	4	0	0	1	0	3	0	0
Rensselaer at Hartford .....	508	6	0	30	7	309	73	83
Southern Connecticut State University .....	333	28	0	4	13	264	21	3
St. Joseph College .....	66	1	0	1	0	64	0	0
Trinity College .....	28	3	0	1	1	20	3	0
University of Bridgeport .....	266	0	1	22	1	40	0	202
University of Connecticut .....	1,407	30	3	65	37	836	5	431
University of Hartford .....	264	20	1	11	18	205	0	9
University of New Haven .....	748	28	0	20	6	488	15	191
Wesleyan University .....	117	3	0	6	4	51	3	50
Western Connecticut State University .....	25	0	0	1	0	21	3	0
Yale University .....	1,229	24	3	62	38	494	159	449
Maine .....	450	2	2	5	0	298	39	104
University of Maine .....	450	2	2	5	0	298	39	104
University of New England .....	0	0	0	0	0	0	0	0
Massachusetts .....	13,372	330	55	808	330	6,696	1,175	3,978
American International College .....	184	1	0	0	0	170	0	13
Anna Maria College .....	50	0	0	0	0	47	3	0
Assumption College .....	48	0	0	0	0	26	22	0
Boston College .....	454	17	0	19	23	268	2	125
Boston University .....	2,082	34	2	145	41	691	572	597
Brandeis University .....	550	9	0	50	18	266	5	202
Bridgewater State College .....	81	1	1	2	0	64	8	5
Clark University .....	277	3	1	6	7	132	23	105
Emerson College .....	0	0	0	0	0	0	0	0
Framingham State College .....	2	2	0	0	0	0	0	0
Harvard University .....	2,852	107	15	210	95	1,421	236	768
MGH Institute of Health Professions .....	0	0	0	0	0	0	0	0
Mass College of Pharmacy/Allied Health .....	23	0	0	1	0	4	0	18
Massachusetts Institute of Technology .....	1,812	47	5	140	45	913	35	627
Mount Holyoke College .....	3	1	0	0	0	2	0	0
Northeastern University .....	718	18	6	19	16	292	67	300
Salem State College .....	22	0	0	0	0	0	2	20
Smith College .....	4	0	0	0	0	2	0	2
Tufts University .....	597	12	0	57	17	402	1	108
University of Massachusetts .....	2,246	54	9	105	56	1,221	111	690
University of Massachusetts Dartmouth .....	171	3	1	5	1	84	4	73
University of Massachusetts Lowell .....	794	16	0	39	6	458	82	193
Western New England College .....	0	0	0	0	0	0	0	0
Williams College .....	21	0	0	0	0	0	0	21
Woods Hole Oceanographic Institution .....	105	0	2	5	2	69	0	27
Worcester Polytechnic Institute .....	263	5	13	4	3	154	0	84
Worcester State College .....	13	0	0	1	0	10	2	0
New Hampshire .....	921	9	3	28	11	599	69	202
Dartmouth College .....	252	3	3	12	2	184	0	48
Rivier College .....	96	0	0	4	0	27	26	39
University of New Hampshire .....	573	6	0	12	9	388	43	115
Rhode Island .....	1,248	32	4	42	20	750	50	350
Brown University .....	619	16	1	21	8	291	30	252
Rhode Island College .....	49	0	1	1	0	40	7	0
University of Rhode Island .....	580	16	2	20	12	419	13	98
Vermont .....	519	16	2	21	11	410	0	59
Goddard College .....	68	3	0	8	4	50	0	3

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Vermont, continued:								
Marlboro College .....	1	0	0	0	0	1	0	0
Middlebury College .....	0	0	0	0	0	0	0	0
University of Vermont .....	450	13	2	13	7	359	0	56
Middle Atlantic .....	53,221	3,066	103	3,874	1,929	27,749	4,340	12,160
New Jersey .....	7,412	327	11	743	233	3,424	647	2,027
College of New Jersey, The .....	0	0	0	0	0	0	0	0
Drew University .....	0	0	0	0	0	0	0	0
Fairleigh Dickinson University .....	781	29	2	39	20	401	82	208
Kean University .....	347	46	0	38	23	213	27	0
Monmouth University .....	91	2	0	11	2	17	15	44
Montclair State University .....	441	11	0	58	15	277	68	12
New Jersey Institute of Technology .....	1,003	39	1	179	40	142	176	426
Princeton University .....	924	20	1	53	19	460	14	357
Rutgers the State Univ of New Jersey .....	2,543	121	3	190	65	1,319	99	746
Seton Hall University .....	543	40	3	48	17	270	157	8
Stevens Institute of Technology .....	505	6	0	96	14	224	2	163
Univ of Med and Dentistry of New Jersey .....	214	12	1	29	16	86	7	63
William Paterson U of NJ .....	20	1	0	2	2	15	0	0
New York .....	32,298	2,189	65	2,309	1,441	15,718	3,101	7,475
Adelphi University .....	355	12	0	14	18	194	102	15
Albany Medical College .....	80	4	0	8	2	42	3	21
Alfred University .....	64	1	0	1	0	62	0	0
CUNY Bernard Baruch College .....	511	83	1	75	46	86	169	51
CUNY Brooklyn College .....	493	134	1	76	21	131	77	53
CUNY City College .....	762	137	0	88	111	215	19	192
CUNY College of Staten Island .....	66	1	0	16	0	18	31	0
CUNY Graduate School and Univ Center .....	1,905	83	3	67	85	1,158	50	459
CUNY Herbert H. Lehman College .....	57	6	0	8	10	8	15	10
CUNY Hunter College .....	206	9	0	23	15	106	32	21
CUNY John Jay College of Crim Justice .....	971	197	1	28	117	562	54	12
CUNY Mt. Sinai School of Medicine .....	192	9	0	38	4	79	0	62
CUNY Queens College .....	604	46	1	176	30	171	63	117
Clarkson University .....	53	1	0	1	0	21	0	30
College of New Rochelle .....	151	20	0	1	7	45	78	0
College of St Rose .....	125	3	0	1	2	102	16	1
Columbia Univ in the City of New York .....	1,846	39	1	189	52	788	63	714
Cooper Union .....	0	0	0	0	0	0	0	0
Cornell University .....	2,602	67	8	174	80	1,218	0	1,055
Fordham University .....	458	14	0	0	32	215	104	93
Hofstra University .....	360	4	0	6	2	123	216	9
Iona College .....	164	8	0	13	5	48	90	0
Ithaca College .....	0	0	0	0	0	0	0	0
Long Island University .....	935	271	4	86	57	402	64	51
Manhattan College .....	4	0	0	1	1	1	1	0
Marist College .....	289	9	0	55	8	204	13	0
New School University .....	1,000	83	1	37	71	451	84	273
New York Institute of Technology .....	521	44	3	75	25	207	2	165
New York Medical College .....	174	9	0	20	4	71	28	42
New York University .....	2,914	180	4	241	106	1,269	318	796
Niagara University .....	19	2	0	1	0	16	0	0
Pace University .....	561	39	0	37	19	192	198	76
Polytechnic University .....	478	11	0	59	9	114	218	67
Pratt Institute .....	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute .....	425	11	0	12	4	262	2	134
Rochester Institute of Technology .....	349	7	0	23	6	189	24	100
Russell Sage College .....	83	2	0	0	0	29	52	0
SUNY Health Science Center at Syracuse .....	72	0	0	4	0	55	0	13
SUNY College at Brockport .....	295	2	0	3	1	280	9	0
SUNY College at Buffalo .....	22	2	1	0	0	14	1	4
SUNY College at Cortland .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
New York, continued:								
SUNY College at Fredonia .....	40	0	0	0	0	40	0	0
SUNY College at Geneseo .....	3	0	0	0	0	3	0	0
SUNY College at Oneonta .....	4	0	0	0	0	4	0	0
SUNY College at Oswego .....	132	9	0	0	2	121	0	0
SUNY College at Plattsburgh .....	18	0	0	0	0	13	0	5
SUNY College at Potsdam .....	2	0	0	0	0	2	0	0
SUNY College of Env Science and Forestry .....	327	4	0	2	6	250	0	65
SUNY College of Optometry .....	0	0	0	0	0	0	0	0
SUNY Health Science Center at Brooklyn .....	66	2	0	8	0	12	1	43
SUNY Inst of Technology at Utica-Rome .....	56	0	0	4	1	44	3	4
SUNY at Albany .....	2,079	112	5	26	75	1,163	335	363
SUNY at Binghamton .....	830	39	3	22	36	467	0	263
SUNY at Buffalo .....	1,682	56	6	119	38	947	17	499
SUNY at New Paltz .....	128	2	0	8	0	79	0	39
SUNY at Stony Brook .....	1,607	45	3	124	40	721	8	666
Saint John's University .....	466	48	0	25	44	249	50	50
Sarah Lawrence College .....	55	3	1	3	0	35	0	13
St. Bonaventure University .....	9	0	0	0	0	9	0	0
Syracuse University .....	1,000	47	10	30	44	451	246	172
Teachers College, Columbia University .....	1,998	226	6	177	133	1,035	226	195
The Rockefeller University .....	110	3	0	18	9	34	14	32
Union College .....	14	0	0	2	0	11	0	1
University of Rochester .....	852	13	1	45	13	476	1	303
Vassar College .....	0	0	0	0	0	0	0	0
Wagner College .....	20	0	1	1	1	17	0	0
Yeshiva University .....	634	30	0	38	49	387	4	126
Pennsylvania .....	13,511	550	27	822	255	8,607	592	2,658
Allegheny University of Health Sciences .....	544	39	3	60	10	378	10	44
Bloomsburg University of Pennsylvania .....	7	0	0	0	0	7	0	0
Bryn Mawr College .....	97	3	1	3	0	78	0	12
Bucknell University .....	22	0	0	0	0	19	0	3
California University of Pennsylvania .....	175	4	0	0	0	151	0	20
Carnegie Mellon University .....	1,306	49	3	101	27	686	66	374
Clarion University of Pennsylvania .....	38	2	0	0	0	36	0	0
Drexel University .....	884	45	5	52	8	516	110	148
Duquesne University .....	341	5	0	3	2	271	21	39
East Stroudsburg Univ of Pennsylvania .....	97	3	0	1	0	87	0	6
Edinboro University of Pennsylvania .....	103	4	0	1	3	93	1	1
Gannon University .....	115	3	0	1	1	109	0	1
Indiana University of Pennsylvania .....	321	15	0	9	4	265	1	27
Kutztown University of Pennsylvania .....	128	3	0	6	3	110	4	2
Lehigh University .....	409	9	0	24	5	195	149	27
Mansfield University of Pennsylvania .....	8	0	0	0	0	8	0	0
Marywood University .....	187	3	1	1	2	173	7	0
Medical College of Pennsylvania, The .....	0	0	0	0	0	0	0	0
Millersville University of Pennsylvania .....	114	5	0	1	1	106	0	1
Pennsylvania State University .....	2,362	79	5	86	44	1,518	12	618
Philadelphia Col of Osteopathic Med .....	188	9	0	9	4	166	0	0
Philadelphia Coll of Pharmacy and Sci .....	29	0	0	4	0	14	1	10
Shippensburg University of Pennsylvania .....	326	15	2	1	6	289	0	13
Slippery Rock University of Pennsylvania .....	189	6	0	5	0	175	3	0
St Joseph's University .....	231	15	0	91	3	119	1	2
Swarthmore College .....	0	0	0	0	0	0	0	0
Temple University .....	845	61	2	139	28	481	7	127
Thomas Jefferson University .....	260	19	3	18	21	177	4	18
University of Pennsylvania .....	1,585	49	0	91	28	843	22	552
University of Pittsburgh .....	1,885	99	1	86	48	1,048	132	471
University of Scranton .....	96	0	0	2	2	71	5	16
Villanova University .....	398	2	1	25	4	225	36	105
West Chester University of Pennsylvania .....	220	4	0	2	1	192	0	21
Widener University .....	0	0	0	0	0	0	0	0
Wilkes University .....	1	0	0	0	0	1	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
East North Central .....	49,107	2,767	160	2,679	1,112	29,104	1,089	12,196
Illinois .....	17,377	1,389	44	1,359	495	9,653	557	3,880
Bradley University .....	107	0	0	14	0	10	20	63
Chicago School of Prof Psych .....	199	17	0	7	9	155	0	11
Chicago State University .....	308	264	1	2	7	26	0	8
DePaul University .....	1,942	207	1	340	90	1,132	59	113
Eastern Illinois University .....	131	0	0	6	0	5	105	15
Finch U of Hlth Sci/The Chicago Med Sch .....	253	6	0	58	14	158	0	17
Governors State University .....	418	119	1	16	20	237	15	10
Illinois Institute of Technology .....	1,249	121	0	213	34	541	17	323
Illinois State University .....	547	28	0	18	4	423	1	73
Loyola University of Chicago .....	793	32	2	61	26	494	10	168
Midwestern University .....	0	0	0	0	0	0	0	0
Northeastern Illinois University .....	348	11	0	63	34	220	2	18
Northern Illinois University .....	849	22	0	62	10	475	114	166
Northwestern University .....	841	37	3	49	20	440	16	276
Roosevelt University .....	571	140	2	27	27	286	35	54
Rush University .....	85	2	0	7	1	56	0	19
Southern Illinois Univ at Carbondale .....	1,059	47	5	26	19	696	15	251
Southern Illinois Univ at Edwardsville .....	477	50	3	14	3	339	0	68
Univ of Illinois at Urbana-Champaign .....	2,851	59	18	142	56	1,428	88	1,060
University of Chicago .....	1,918	48	6	124	61	1,086	0	593
University of Illinois at Chicago .....	1,271	77	2	76	51	603	35	427
University of Illinois at Springfield .....	780	87	0	28	7	600	0	58
Western Illinois University .....	380	15	0	6	2	243	25	89
Indiana .....	6,020	155	26	202	135	3,534	104	1,864
Ball State University .....	439	0	0	2	0	306	0	131
Butler University .....	0	0	0	0	0	0	0	0
Indiana State University .....	312	23	1	2	10	190	8	78
Indiana University .....	2,719	71	8	115	60	1,807	67	591
Indiana Wesleyan University .....	0	0	0	0	0	0	0	0
Purdue University .....	1,914	53	10	70	50	890	17	824
Rose-Hulman Institute of Technology .....	7	0	0	0	0	2	0	5
University of Evansville .....	0	0	0	0	0	0	0	0
University of Indianapolis .....	0	0	0	0	0	0	0	0
University of Notre Dame .....	558	8	3	12	15	284	4	232
University of Saint Francis .....	30	0	0	1	0	19	8	2
Valparaiso University .....	41	0	4	0	0	36	0	1
Michigan .....	9,091	641	31	389	195	5,141	150	2,544
Andrews University .....	98	8	1	1	5	42	0	41
Central Michigan University .....	462	14	1	15	2	321	13	96
Eastern Michigan University .....	624	18	1	50	5	281	29	240
Grand Valley State University .....	194	7	1	14	2	154	2	14
Michigan State University .....	2,332	113	8	65	56	1,266	20	804
Michigan Technological University .....	218	3	0	2	0	115	4	94
Northern Michigan University .....	97	1	2	2	0	92	0	0
Oakland University .....	199	14	1	7	2	142	2	31
University of Detroit Mercy .....	263	40	0	9	3	149	8	54
University of Michigan .....	2,275	181	11	138	92	1,315	18	520
Wayne State University .....	1,241	152	3	69	14	568	54	381
Western Michigan University .....	1,088	90	2	17	14	696	0	269
Ohio .....	11,340	492	31	572	155	7,233	167	2,690
Air Force Institute of Technology .....	219	0	0	5	0	94	0	120
Antioch University .....	1,083	34	6	27	21	972	17	6
Bowling Green State University .....	492	26	3	9	4	296	2	152
Case Western Reserve University .....	806	21	0	78	14	460	14	219
Cleveland State University .....	468	47	0	16	10	314	18	63
John Carroll University .....	83	1	0	2	0	78	0	2
Kent State University .....	786	32	2	13	6	485	22	226

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Ohio, continued:								
Medical College of Ohio .....	94	0	0	42	1	47	4	0
Miami University (OH) .....	473	15	2	45	6	324	5	76
Ohio State University .....	2,632	92	3	214	38	1,402	26	857
Ohio University .....	617	9	0	9	5	343	0	251
Union Institute .....	410	51	8	7	3	305	35	1
University of Akron .....	953	16	0	22	9	683	9	214
University of Cincinnati .....	877	39	1	24	9	547	2	255
University of Dayton .....	135	8	0	5	0	97	1	24
University of Toledo .....	409	32	1	33	3	249	6	85
Wright State University .....	560	46	5	18	22	333	5	131
Xavier University .....	117	9	0	1	3	103	1	0
Youngstown State University .....	126	14	0	2	1	101	0	8
Wisconsin .....	5,279	90	28	157	132	3,543	111	1,218
Marquette University .....	402	9	0	10	8	247	3	125
Medical College of Wisconsin .....	199	0	0	6	2	76	65	50
Milwaukee School of Engineering .....	0	0	0	0	0	0	0	0
University of Wisconsin-Eau Claire .....	13	0	0	0	0	13	0	0
University of Wisconsin-Green Bay .....	39	0	0	0	0	31	0	8
University of Wisconsin-La Crosse .....	56	0	0	3	0	51	0	2
University of Wisconsin-Madison .....	3,273	30	19	103	95	2,138	39	849
University of Wisconsin-Milwaukee .....	969	47	6	29	25	693	3	166
University of Wisconsin-Oshkosh .....	130	4	2	4	1	118	1	0
University of Wisconsin-Platteville .....	8	0	0	1	0	7	0	0
University of Wisconsin-River Falls .....	31	0	0	0	0	31	0	0
University of Wisconsin-Stevens Point .....	61	0	0	0	0	60	0	1
University of Wisconsin-Stout .....	81	0	1	1	1	63	0	15
University of Wisconsin-Whitewater .....	17	0	0	0	0	15	0	2
West North Central .....	20,872	705	112	647	400	12,467	1,821	4,720
Iowa .....	3,325	85	4	78	63	1,792	152	1,151
Drake University .....	210	23	0	7	14	156	6	4
Iowa State University .....	1,751	27	2	32	23	875	96	696
Loras College .....	14	0	0	0	0	14	0	0
Maharishi University of Management .....	78	0	0	0	0	14	35	29
Marycrest International Univ .....	37	0	0	0	1	21	0	15
Univ of Osteopathic Med & Health Sci .....	0	0	0	0	0	0	0	0
University of Iowa .....	1,117	28	2	37	24	615	14	397
University of Northern Iowa .....	118	7	0	2	1	97	1	10
Kansas .....	4,451	152	34	132	99	2,850	284	900
Emporia State University .....	224	2	2	3	3	174	20	20
Fort Hays State University .....	55	0	0	1	2	52	0	0
Kansas State University .....	1,360	36	4	74	19	810	13	404
Pittsburg State University .....	171	2	1	3	2	137	14	12
University of Kansas .....	2,066	80	25	37	57	1,333	236	298
Washburn University of Topeka .....	22	1	0	0	1	20	0	0
Wichita State University .....	553	31	2	14	15	324	1	166
Minnesota .....	5,360	201	30	161	83	2,763	1,190	932
Bemidji State University .....	18	0	0	4	0	12	0	2
Mayo Graduate School .....	137	2	1	9	10	83	5	27
Minnesota State University at Mankato .....	270	3	3	14	2	198	12	38
Moorhead State University .....	43	0	0	0	0	43	0	0
Saint Mary's University of Minnesota .....	1,047	0	0	0	0	0	1,047	0
St. Cloud State University .....	107	2	0	1	0	101	0	3
University of Minnesota .....	3,183	74	12	121	53	2,012	54	857
Walden University .....	555	120	14	12	18	314	72	5
Missouri .....	4,395	197	12	205	106	2,926	39	910
Central Missouri State University .....	226	14	0	7	3	200	2	0

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**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

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		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Missouri, continued:								
Forest Institute of Professional Psych .....	224	4	1	4	7	205	0	3
Kirksville College of Osteopathic Med .....	0	0	0	0	0	0	0	0
Lincoln University .....	19	7	0	0	1	10	1	0
Northwest Missouri State University .....	33	0	0	0	0	31	0	2
Saint Louis University .....	415	38	1	13	9	295	3	56
Southeast Missouri State University .....	44	2	0	1	0	38	0	3
Southwest Missouri State University .....	244	7	2	7	1	224	0	3
Truman State University .....	15	0	0	7	0	6	2	0
University of Missouri-Columbia .....	1,179	60	1	62	37	717	11	291
University of Missouri-Kansas City .....	465	14	3	24	13	260	10	141
University of Missouri-Rolla .....	225	4	1	6	1	108	1	104
University of Missouri-St. Louis .....	382	25	1	11	16	261	4	64
Washington University .....	924	22	2	63	18	571	5	243
Nebraska .....	1,900	56	5	35	31	1,223	27	523
Creighton University .....	98	0	0	6	4	58	2	28
University of Nebraska - Lincoln .....	1,198	27	4	14	20	717	5	411
University of Nebraska - Omaha .....	483	27	0	5	7	350	20	74
University of Nebraska Medical Center .....	78	2	1	10	0	55	0	10
University of Nebraska at Kearney .....	43	0	0	0	0	43	0	0
North Dakota .....	857	12	16	14	13	547	69	186
North Dakota State University .....	440	4	2	5	6	270	2	151
University of North Dakota .....	417	8	14	9	7	277	67	35
South Dakota .....	584	2	11	22	5	366	60	118
South Dakota School of Mines and Tech .....	77	0	0	0	0	0	57	20
South Dakota State University .....	304	2	5	14	2	215	2	64
University of South Dakota .....	203	0	6	8	3	151	1	34
South Atlantic .....	48,845	4,289	117	2,439	1,477	30,856	957	8,710
Delaware .....	1,054	66	3	35	17	622	13	298
Delaware State University .....	30	14	0	1	0	12	0	3
University of Delaware .....	1,024	52	3	34	17	610	13	295
District of Columbia .....	5,654	766	13	333	209	2,967	202	1,164
American University .....	1,857	253	5	85	96	995	53	370
Catholic University of America .....	359	15	1	19	13	238	7	66
Gallaudet University .....	0	0	0	0	0	0	0	0
George Washington University .....	2,266	108	4	142	80	1,408	119	405
Georgetown University .....	641	9	3	64	18	312	12	223
Howard University .....	528	378	0	23	2	14	11	100
University of the District of Columbia .....	3	3	0	0	0	0	0	0
Florida .....	9,959	680	20	386	755	6,394	268	1,456
Embry-Riddle Aeronautical University .....	79	5	0	6	4	37	2	25
Florida A&M University .....	144	108	0	4	1	13	18	0
Florida Atlantic University .....	593	45	1	30	42	386	0	89
Florida Institute of Technology .....	511	20	0	11	14	327	6	133
Florida International University .....	753	68	1	20	203	312	149	0
Florida State University .....	1,095	57	2	42	28	754	1	211
Jacksonville University .....	0	0	0	0	0	0	0	0
Nova Southeastern University .....	1,722	128	4	55	159	1,267	40	69
Stetson University .....	0	0	0	0	0	0	0	0
University of Central Florida .....	763	41	3	42	38	541	0	98
University of Florida .....	2,139	73	1	88	92	1,331	5	549
University of Miami .....	756	44	6	24	98	369	6	209
University of South Florida .....	1,037	58	0	47	69	762	28	73
University of West Florida .....	367	33	2	17	7	295	13	0

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Georgia .....	5,575	709	9	229	84	3,486	68	990
Atlanta University .....	0	0	0	0	0	0	0	0
Augusta State University .....	40	1	0	0	2	37	0	0
Clark Atlanta University .....	319	276	0	8	5	1	12	17
Emory University .....	707	37	1	34	13	492	7	123
Fort Valley State College .....	0	0	0	0	0	0	0	0
Georgia College and State University .....	213	46	1	8	4	143	1	10
Georgia Institute of Technology .....	906	60	1	28	10	563	0	244
Georgia Southern University .....	176	20	1	2	1	142	1	9
Georgia State University .....	1,004	134	1	89	29	609	10	132
Institute of Paper Science & Technology .....	0	0	0	0	0	0	0	0
Medical College of Georgia .....	98	4	0	4	0	55	1	34
Mercer University .....	24	0	0	0	0	0	24	0
Morehouse School of Medicine .....	16	13	0	0	0	2	0	1
State University of West Georgia .....	145	19	1	1	3	112	3	6
University of Georgia .....	1,696	49	2	54	15	1,154	9	413
Valdosta State University .....	231	50	1	1	2	176	0	1
Maryland .....	6,971	548	17	443	132	4,014	212	1,605
Coppin State College .....	35	34	0	0	0	1	0	0
Frostburg State University .....	85	0	0	0	2	81	0	2
Hood College .....	350	11	1	36	5	198	88	11
Johns Hopkins University .....	1,491	36	3	173	31	839	8	401
Loyola College .....	501	41	0	10	7	384	23	36
Morgan State University .....	47	34	0	1	1	1	0	10
Towson University .....	458	39	4	30	6	287	3	89
Unifomed Serv Univ of the Hlth Sciences .....	62	3	1	5	2	48	3	0
Univ of Maryland - Baltimore County .....	755	62	0	58	6	466	5	158
University of Baltimore .....	314	101	0	2	2	197	4	8
University of Maryland - College Park .....	2,375	144	8	96	61	1,266	43	757
University of Maryland Eastern Shore .....	123	22	0	0	3	35	1	62
University of Maryland at Baltimore .....	349	20	0	31	6	193	29	70
Washington College .....	26	1	0	1	0	18	5	1
North Carolina .....	7,675	785	29	363	100	5,310	82	1,006
Appalachian State University .....	211	5	0	1	4	195	0	6
Duke University .....	1,067	31	2	123	18	706	8	179
East Carolina University .....	405	20	3	12	4	332	28	6
North Carolina A&T State University .....	172	106	2	23	1	15	18	7
North Carolina Central University .....	394	327	4	13	4	45	1	0
North Carolina State University .....	2,015	80	7	53	27	1,457	0	391
Univ of North Carolina at Chapel Hill .....	2,095	124	8	84	32	1,514	13	320
Univ of North Carolina at Charlotte .....	461	43	1	29	2	315	0	71
Univ of North Carolina at Greensboro .....	339	37	1	4	5	276	2	14
University of North Carolina/Wilmington .....	165	1	1	10	0	153	0	0
Wake Forest University .....	236	7	0	11	3	192	12	11
Western Carolina University .....	115	4	0	0	0	110	0	1
South Carolina .....	2,452	124	3	43	30	1,641	34	577
Clemson University .....	929	21	1	8	4	589	21	285
College of Charleston .....	165	5	1	1	1	148	1	8
Furman University .....	8	0	0	1	1	6	0	0
Medical University of South Carolina .....	225	11	0	13	3	177	0	21
University of South Carolina .....	1,035	78	1	20	20	641	12	263
Winthrop University .....	90	9	0	0	1	80	0	0
Virginia .....	8,058	586	19	587	130	5,338	60	1,338
College of William and Mary .....	361	13	1	11	9	284	0	43
Eastern Virginia Medical School .....	130	17	0	3	2	88	2	18
George Mason University .....	2,295	103	5	277	49	1,457	0	404
Hampton University .....	118	57	1	7	0	2	7	44

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Virginia, continued:								
Hollins University .....	7	0	0	0	1	0	6	0
Institute of Textile Technology .....	0	0	0	0	0	0	0	0
James Madison University .....	212	10	1	10	0	176	0	15
Lynchburg College .....	0	0	0	0	0	0	0	0
Old Dominion University .....	935	111	3	22	13	560	29	197
Radford University .....	177	12	1	8	2	139	0	15
University of Richmond .....	13	0	0	1	0	12	0	0
University of Virginia .....	1,060	40	2	66	14	780	3	155
Virginia Commonwealth University .....	998	81	3	89	8	726	6	85
Virginia Polytechnic Inst and State Univ .....	1,669	79	2	91	31	1,097	7	362
Virginia State University .....	83	63	0	2	1	17	0	0
West Virginia .....	1,447	25	4	20	20	1,084	18	276
Marshall University .....	579	8	2	4	14	506	18	27
University of Charleston .....	0	0	0	0	0	0	0	0
West Virginia Graduate College .....	0	0	0	0	0	0	0	0
West Virginia University .....	868	17	2	16	6	578	0	249
West Virginia University Institute of Te .....	0	0	0	0	0	0	0	0
East South Central .....	13,331	1,582	30	350	137	8,750	117	2,365
Alabama .....	3,688	488	10	138	54	2,239	19	740
Alabama A&M University .....	134	67	0	3	4	7	0	53
Alabama State University .....	20	17	0	0	0	3	0	0
Auburn University .....	1,059	113	2	16	15	678	8	227
Jacksonville State University .....	227	57	3	3	5	145	1	13
Troy State University in Montgomery .....	50	10	0	4	2	33	1	0
Tuskegee University .....	68	59	0	2	0	0	0	7
University of Alabama at Birmingham, The .....	853	81	2	50	13	501	6	200
University of Alabama in Huntsville, The .....	279	15	1	18	4	166	0	75
University of Alabama, The .....	734	53	0	38	8	517	2	116
University of Montevallo .....	0	0	0	0	0	0	0	0
University of South Alabama .....	264	16	2	4	3	189	1	49
Kentucky .....	2,747	114	7	31	30	1,988	66	511
Eastern Kentucky University .....	309	9	1	1	2	273	2	21
Morehead State University .....	100	8	0	1	0	88	0	3
Murray State University .....	190	6	1	0	0	154	0	29
Spalding University .....	137	6	1	1	3	121	0	5
University of Kentucky .....	1,241	51	1	13	11	776	57	332
University of Louisville .....	572	24	1	14	14	417	1	101
Western Kentucky University .....	198	10	2	1	0	159	6	20
Mississippi .....	2,520	494	4	59	17	1,457	28	461
Jackson State University .....	313	224	0	13	0	23	0	53
Mississippi State University .....	1,127	176	2	30	8	672	27	212
Mississippi University for Women .....	0	0	0	0	0	0	0	0
University of Mississippi .....	507	54	2	9	1	292	1	148
University of Southern Mississippi .....	573	40	0	7	8	470	0	48
Tennessee .....	4,376	486	9	122	36	3,066	4	653
Austin Peay State University .....	58	5	0	1	3	49	0	0
East Tennessee State University .....	268	1	0	8	1	225	0	33
Fisk University .....	38	34	0	1	0	1	0	2
Meharry Medical College .....	125	100	0	3	1	8	3	10
Middle Tennessee State University .....	287	12	1	20	4	250	0	0
Tennessee State University .....	327	155	0	8	4	144	0	16
Tennessee Technological University .....	155	0	0	0	2	141	0	12
University of Memphis .....	661	72	0	10	3	470	0	106
University of Tennessee at Chattanooga .....	198	26	0	3	3	156	0	10
University of Tennessee at Knoxville .....	1,351	44	6	28	10	1,040	0	223
University of Tennessee, Memphis .....	142	7	0	3	1	74	0	57

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Tennessee, continued:								
Vanderbilt University .....	766	30	2	37	4	508	1	184
West South Central .....	27,404	1,788	215	1,541	1,555	15,726	455	6,124
Arkansas .....	1,523	131	8	70	12	1,018	42	242
Arkansas State University .....	314	9	0	0	0	209	0	96
University of Arkansas - Med Sci Campus .....	145	11	1	8	0	91	0	34
University of Arkansas Main .....	661	53	5	50	9	429	41	74
University of Arkansas at Little Rock .....	211	41	0	8	3	120	1	38
University of Central Arkansas .....	192	17	2	4	0	169	0	0
Louisiana .....	4,118	621	9	97	77	2,284	83	947
Grambling State University .....	7	6	0	0	0	0	0	1
Louisiana State University .....	2,246	197	8	66	50	1,321	49	555
Louisiana Tech University .....	109	2	0	0	0	48	0	59
Loyola University New Orleans .....	0	0	0	0	0	0	0	0
McNeese State University .....	101	8	0	5	2	85	0	1
Nicholls State University .....	65	15	0	0	2	48	0	0
Northeast Louisiana University .....	157	26	0	2	0	108	0	21
Northwestern State University .....	34	2	0	0	1	29	2	0
Southeastern Louisiana University .....	78	2	0	0	1	74	1	0
Southern University A & M, All Campuses .....	436	331	0	0	0	71	24	10
Tulane University .....	565	27	0	20	19	358	7	134
University of Southwestern Louisiana .....	320	5	1	4	2	142	0	166
Xavier University of Louisiana .....	0	0	0	0	0	0	0	0
Oklahoma .....	2,628	68	96	113	47	1,545	55	704
East Central University .....	33	4	2	1	0	26	0	0
Northeastern State University .....	85	3	6	0	1	73	2	0
Oklahoma State University .....	1,171	30	41	50	21	613	0	416
Oral Roberts University .....	0	0	0	0	0	0	0	0
Southwestern Oklahoma State University .....	22	0	0	0	0	21	0	1
University of Oklahoma .....	1,125	27	41	58	18	695	44	242
University of Tulsa .....	192	4	6	4	7	117	9	45
Texas .....	19,135	968	102	1,261	1,419	10,879	275	4,231
Abilene Christian University .....	126	3	2	0	8	98	8	7
Angelo State University .....	120	5	2	1	16	93	0	3
Baylor College of Dentistry .....	10	0	0	0	1	4	0	5
Baylor College of Medicine .....	317	6	0	19	10	175	0	107
Baylor University .....	282	2	1	15	18	194	9	43
Lamar University .....	163	5	0	9	5	61	24	59
Midwestern State University .....	148	6	0	28	3	84	26	1
Prairie View A&M University .....	100	86	0	0	4	4	0	6
Rice University .....	514	19	3	29	18	284	5	156
Sam Houston State University .....	387	23	2	3	17	299	0	43
Southern Methodist University .....	331	3	2	17	5	203	5	96
Southwest Texas State University .....	643	21	5	16	88	431	0	82
St. Mary's University .....	193	13	1	5	59	90	6	19
Stephen F. Austin State University .....	254	11	4	3	6	212	0	18
Sul Ross State University .....	78	0	0	2	21	53	0	2
Tarleton State University .....	57	1	0	0	2	53	0	1
Texas A&M University .....	3,066	54	4	122	146	1,808	43	889
Texas A&M University-Commerce .....	310	15	24	4	3	160	0	104
Texas A&M University-Corpus Christi .....	335	7	1	14	79	205	0	29
Texas A&M University-Kingsville .....	240	5	1	3	100	93	10	28
Texas Christian University .....	122	1	0	4	5	82	2	28
Texas Southern University .....	284	256	0	2	4	2	1	19
Texas Tech University .....	891	4	0	22	33	580	13	239
Texas Woman's University .....	521	29	4	33	42	390	23	0
Trinity University .....	0	0	0	0	0	0	0	0
U of North TX Hlth Sci Ctr at Ft Worth .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Texas, continued:								
Univ of Texas Hlth Sci Ctr San Antonio .....	190	5	0	10	17	101	2	55
Univ of Texas Hlth Sci Ctr at Houston .....	566	16	3	55	32	303	2	155
Univ of Texas M.D. Anderson Cancer Ctr .....	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston .....	148	2	1	9	7	70	1	58
Univ of Texas SW Medical Ctr at Dallas .....	328	4	0	27	14	197	2	84
University of Central Texas .....	226	67	4	2	12	130	4	7
University of Houston .....	1,200	34	6	361	49	463	10	277
University of Houston - Victoria .....	32	1	0	0	5	26	0	0
University of Houston Clear Lake .....	1,018	114	5	94	75	559	0	171
University of Incarnate Word .....	80	7	0	1	23	39	5	5
University of North Texas .....	1,274	44	11	149	42	817	50	161
University of Texas at Arlington .....	865	27	3	51	28	417	0	339
University of Texas at Austin .....	2,090	28	4	64	100	1,232	17	645
University of Texas at Dallas .....	414	20	2	25	11	244	0	112
University of Texas at El Paso .....	372	9	2	14	123	111	0	113
University of Texas at San Antonio .....	335	7	1	46	87	157	2	35
University of Texas at Tyler .....	133	1	0	0	3	121	5	3
University of Texas of the Permian Basin .....	63	0	0	0	6	56	0	1
University of Texas-Pan American .....	124	3	1	2	82	30	0	6
West Texas A&M University .....	185	4	3	0	10	148	0	20
Mountain .....	19,794	254	209	734	819	13,654	981	3,143
Arizona .....	4,684	85	71	179	233	3,078	85	953
Arizona State University .....	1,963	43	19	66	89	1,221	57	468
Northern Arizona University .....	538	16	26	10	31	430	1	24
University of Arizona .....	2,183	26	26	103	113	1,427	27	461
Colorado .....	5,993	108	51	255	228	4,317	160	874
Colorado School of Mines .....	462	5	2	10	9	283	10	143
Colorado State University .....	1,393	12	11	32	41	1,065	4	228
National Technological University .....	118	3	0	16	4	82	5	8
University of Colorado .....	3,086	73	26	153	134	2,205	139	356
University of Denver .....	742	14	10	39	32	514	2	131
University of Northern Colorado .....	192	1	2	5	8	168	0	8
Western State College .....	0	0	0	0	0	0	0	0
Idaho .....	1,157	4	13	26	20	921	21	152
Idaho State University .....	231	1	3	1	8	210	0	8
University of Idaho .....	926	3	10	25	12	711	21	144
Montana .....	1,046	3	17	28	7	894	16	81
Montana State University-Bozeman .....	441	2	3	18	1	363	11	43
Montana Tech of the Univ of Montana .....	22	0	1	0	0	21	0	0
University of Montana .....	583	1	13	10	6	510	5	38
Nevada .....	1,117	9	9	38	35	825	53	148
University of Nevada at Las Vegas .....	312	5	0	8	6	258	3	32
University of Nevada, Reno .....	805	4	9	30	29	567	50	116
New Mexico .....	2,376	33	29	34	254	1,153	484	389
Eastern New Mexico University .....	94	2	2	1	9	74	0	6
New Mexico Highlands University .....	49	1	1	2	11	19	5	10
New Mexico Institute of Mining and Tech .....	169	0	0	0	7	119	0	43
New Mexico State University .....	784	11	7	7	105	39	435	180
University of New Mexico .....	1,280	19	19	24	122	902	44	150
Utah .....	2,751	8	14	149	35	1,973	91	481
Brigham Young University .....	885	2	2	35	13	665	6	162
University of Utah .....	1,090	3	4	102	11	737	81	152

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Utah, continued:								
Utah State University .....	776	3	8	12	11	571	4	167
Wyoming .....	670	4	5	25	7	493	71	65
University of Wyoming .....	670	4	5	25	7	493	71	65
Pacific .....	48,561	1,838	349	5,324	2,882	26,611	3,301	8,256
Alaska .....	581	5	19	10	5	462	10	70
University of Alaska Anchorage .....	99	2	3	2	2	89	1	0
University of Alaska Fairbanks .....	433	3	16	8	3	324	9	70
University of Alaska Southeast .....	49	0	0	0	0	49	0	0
California .....	39,353	1,709	250	4,618	2,694	20,732	2,884	6,466
Azusa Pacific University .....	392	26	0	80	49	177	14	46
Biola University .....	48	0	0	6	2	33	0	7
Cal Schl of Prof Psych Berkeley/Alameda .....	262	17	3	32	17	163	21	9
Calif Poly State Univ, San Luis Obispo .....	249	3	0	0	1	202	1	42
Calif Sch of Prof Psych - Fresno .....	308	15	4	17	15	214	29	14
Calif Sch of Prof Psych - Los Angeles .....	686	64	10	72	67	397	67	9
Calif Sch of Prof Psych - San Diego .....	620	16	10	29	31	481	41	12
Calif State Univ at Dominguez Hills .....	393	162	1	25	69	96	30	10
Calif State Univ at Fullerton .....	784	18	2	109	86	353	76	140
Calif State Univ at Los Angeles .....	596	66	0	106	181	143	55	45
Calif State University at Sacramento .....	1,241	54	1	120	57	742	128	139
Calif State University, Stanislaus .....	107	5	0	4	13	63	22	0
California Institute of Integral Studies .....	360	5	1	4	7	320	11	12
California Institute of Technology .....	598	9	3	39	19	348	0	180
California State Poly University, Pomona .....	355	18	2	70	44	127	44	50
California State Univ - Bakersfield .....	55	1	2	2	8	37	5	0
California State Univ, San Bernadino .....	304	26	3	8	44	151	34	38
California State University, Chico .....	334	6	6	19	23	195	48	37
California State University, Fresno .....	550	20	5	60	112	202	63	88
California State University, Hayward .....	857	122	7	254	57	290	127	0
California State University, Long Beach .....	1,002	43	4	217	82	395	107	154
California State University, Northridge .....	564	19	3	71	58	263	86	64
Chapman University .....	368	15	1	11	22	280	33	6
Charles R. Drew Univ of Medicine & Sci .....	0	0	0	0	0	0	0	0
Claremont Graduate School .....	655	36	3	64	54	287	55	156
Dominican College of San Rafael .....	129	2	0	3	7	83	9	25
Fielding Institute, The .....	937	66	9	23	36	770	11	22
Fuller Theological Seminary .....	369	16	1	71	17	240	6	18
Golden Gate University .....	389	23	0	68	15	156	14	113
Harvey Mudd College .....	0	0	0	0	0	0	0	0
Humboldt State University .....	283	3	8	6	20	209	35	2
John F Kennedy University .....	611	36	9	34	27	472	33	0
Loma Linda University .....	570	33	2	69	69	281	1	115
Loyola Marymount University .....	82	2	0	16	3	49	6	6
Monterey Inst of Intl Studies .....	0	0	0	0	0	0	0	0
National University .....	899	93	3	50	99	617	14	23
Northrop University .....	0	0	0	0	0	0	0	0
Occidental College .....	3	0	0	0	0	3	0	0
Pacific Graduate School of Psychology .....	285	9	3	25	24	208	0	16
Pacific States University .....	9	0	0	0	0	0	0	9
Pepperdine University .....	713	54	8	57	61	361	152	20
RAND Graduate School of Policy Studies .....	54	1	0	1	3	38	0	11
San Diego State University .....	1,041	44	18	128	95	526	130	100
San Francisco State University .....	795	36	11	122	73	358	108	87
San Jose State University .....	795	32	1	196	54	309	97	106
Santa Clara University .....	418	4	1	88	6	101	39	179
Sonoma State University .....	65	4	2	1	5	46	7	0
Stanford University .....	2,064	48	14	270	61	950	55	666
US International University .....	300	15	3	16	12	231	20	3

See explanatory information, if any, and SOURCE at end of table.

**Table 31. Graduate science students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
California, continued:								
US Naval Postgraduate School .....	494	3	0	21	0	238	1	231
University of Calif at Berkeley .....	2,939	70	16	307	132	1,760	142	512
University of Calif at Davis .....	1,920	26	9	190	76	1,095	176	348
University of Calif at Riverside .....	739	4	0	55	47	397	68	168
University of Calif at San Diego .....	1,446	23	7	144	77	826	121	248
University of Calif at San Francisco .....	327	4	0	55	20	210	8	30
University of Calif at Santa Barbara .....	1,129	11	3	80	65	689	103	178
University of Calif at Santa Cruz .....	655	17	4	57	46	365	74	92
University of California, Irvine .....	1,008	5	5	164	57	494	92	191
University of California, Los Angeles .....	2,862	96	22	486	164	1,294	178	622
University of La Verne .....	188	31	2	29	20	89	14	3
University of Redlands .....	0	0	0	0	0	0	0	0
University of San Diego .....	73	0	2	2	5	56	6	2
University of San Francisco .....	131	4	5	18	5	39	21	39
University of Southern California .....	2,601	99	9	324	151	969	45	1,004
University of the Pacific .....	49	1	0	3	3	27	1	14
West Coast University .....	0	0	0	0	0	0	0	0
Wright Institute, The .....	293	28	2	20	21	217	0	5
Hawaii .....	1,375	7	2	263	15	566	84	438
University of Hawaii at Manoa .....	1,375	7	2	263	15	566	84	438
Oregon .....	2,811	29	27	138	50	1,885	107	575
Oregon Grad Inst of Science & Technology .....	162	0	0	2	2	67	3	88
Oregon Health Sciences University .....	136	1	0	15	2	92	8	18
Oregon State University .....	1,009	6	7	73	18	648	27	230
Pacific University .....	0	0	0	0	0	0	0	0
Portland State University .....	782	14	10	28	12	572	41	105
Southern Oregon State College .....	40	0	0	2	0	35	3	0
University of Oregon .....	682	8	10	18	16	471	25	134
University of Portland .....	0	0	0	0	0	0	0	0
Washington .....	4,441	88	51	295	118	2,966	216	707
Central Washington University .....	104	1	6	2	3	85	3	4
Eastern Washington University .....	199	4	7	10	9	151	5	13
Gonzaga University .....	0	0	0	0	0	0	0	0
Pacific Lutheran University .....	67	5	2	1	2	37	18	2
Saint Martin's College .....	0	0	0	0	0	0	0	0
Seattle University .....	129	9	1	9	5	83	17	5
University of Washington .....	2,806	52	22	233	69	1,812	133	485
Walla Walla College .....	12	0	0	0	0	12	0	0
Washington State University .....	932	13	10	32	28	639	17	193
Western Washington University .....	192	4	3	8	2	147	23	5
Whitworth College .....	0	0	0	0	0	0	0	0
Outlying Areas .....	2,274	3	8	65	1,873	180	4	141
Guam .....	77	0	8	53	0	11	2	3
University of Guam .....	77	0	8	53	0	11	2	3
Puerto Rico .....	2,197	3	0	12	1,873	169	2	138
Caribbean Center for Advanced Studies .....	502	0	0	0	502	0	0	0
Ponce School of Medicine .....	17	0	0	0	17	0	0	0
The Pontifical Cath Univ of Puerto Rico .....	10	0	0	0	10	0	0	0
Univ of Puerto Rico Mayaguez Campus .....	445	0	0	1	354	16	0	74
Univ of Puerto Rico Rio Piedras Campus .....	1,113	3	0	6	890	153	2	59
University of Puerto Rico Med Sci Campus .....	110	0	0	5	100	0	0	5

**NOTE:** Includes medical schools

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions .....	100,287	2,827	237	8,060	2,912	43,991	4,215	38,045
New England .....	7,984	128	5	477	133	3,873	671	2,697
Connecticut .....	1,014	25	0	35	13	520	98	323
Central Connecticut State University .....	0	0	0	0	0	0	0	0
Connecticut College .....	0	0	0	0	0	0	0	0
Quinnipiac College .....	0	0	0	0	0	0	0	0
Rensselaer at Hartford .....	318	15	0	14	4	202	66	17
Southern Connecticut State University .....	0	0	0	0	0	0	0	0
St. Joseph College .....	0	0	0	0	0	0	0	0
Trinity College .....	0	0	0	0	0	0	0	0
University of Bridgeport .....	61	0	0	0	0	8	5	48
University of Connecticut .....	419	9	0	13	8	204	11	174
University of Hartford .....	31	1	0	3	0	18	9	0
University of New Haven .....	99	0	0	1	0	70	0	28
Wesleyan University .....	0	0	0	0	0	0	0	0
Western Connecticut State University .....	0	0	0	0	0	0	0	0
Yale University .....	86	0	0	4	1	18	7	56
Maine .....	136	2	0	1	0	76	13	44
University of Maine .....	136	2	0	1	0	76	13	44
University of New England .....	0	0	0	0	0	0	0	0
Massachusetts .....	6,221	97	5	393	117	2,905	551	2,153
American International College .....	0	0	0	0	0	0	0	0
Anna Maria College .....	0	0	0	0	0	0	0	0
Assumption College .....	0	0	0	0	0	0	0	0
Boston College .....	0	0	0	0	0	0	0	0
Boston University .....	368	4	0	18	0	80	102	164
Brandeis University .....	0	0	0	0	0	0	0	0
Bridgewater State College .....	0	0	0	0	0	0	0	0
Clark University .....	0	0	0	0	0	0	0	0
Emerson College .....	0	0	0	0	0	0	0	0
Framingham State College .....	0	0	0	0	0	0	0	0
Harvard University .....	164	3	0	19	1	60	16	65
MGH Institute of Health Professions .....	0	0	0	0	0	0	0	0
Mass College of Pharmacy/Allied Health .....	0	0	0	0	0	0	0	0
Massachusetts Institute of Technology .....	2,333	49	1	229	59	1,125	6	864
Mount Holyoke College .....	0	0	0	0	0	0	0	0
Northeastern University .....	1,006	14	1	30	11	283	285	382
Salem State College .....	0	0	0	0	0	0	0	0
Smith College .....	0	0	0	0	0	0	0	0
Tufts University .....	381	11	1	24	11	219	21	94
University of Massachusetts .....	454	2	1	3	15	151	32	250
University of Massachusetts Dartmouth .....	93	1	0	1	0	40	2	49
University of Massachusetts Lowell .....	782	9	1	41	1	476	80	174
Western New England College .....	58	0	0	2	2	53	0	1
Williams College .....	0	0	0	0	0	0	0	0
Woods Hole Oceanographic Institution .....	29	0	0	1	2	18	0	8
Worcester Polytechnic Institute .....	553	4	0	25	15	400	7	102
Worcester State College .....	0	0	0	0	0	0	0	0
New Hampshire .....	220	0	0	9	2	139	9	61
Dartmouth College .....	56	0	0	3	1	29	0	23
Rivier College .....	0	0	0	0	0	0	0	0
University of New Hampshire .....	164	0	0	6	1	110	9	38
Rhode Island .....	302	3	0	38	1	162	0	98
Brown University .....	82	3	0	1	1	29	0	48
Rhode Island College .....	0	0	0	0	0	0	0	0
University of Rhode Island .....	220	0	0	37	0	133	0	50

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Vermont .....	91	1	0	1	0	71	0	18
Goddard College .....	0	0	0	0	0	0	0	0
Marlboro College .....	0	0	0	0	0	0	0	0
Middlebury College .....	0	0	0	0	0	0	0	0
University of Vermont .....	91	1	0	1	0	71	0	18
Middle Atlantic .....	14,034	428	13	1,177	338	5,717	1,070	5,291
New Jersey .....	2,650	76	3	270	95	1,042	197	967
College of New Jersey, The .....	0	0	0	0	0	0	0	0
Drew University .....	0	0	0	0	0	0	0	0
Fairleigh Dickinson University .....	23	1	0	1	0	4	1	16
Kean University .....	0	0	0	0	0	0	0	0
Monmouth University .....	132	3	0	24	4	60	28	13
Montclair State University .....	0	0	0	0	0	0	0	0
New Jersey Institute of Technology .....	914	34	2	80	65	248	127	358
Princeton University .....	385	4	1	27	6	138	5	204
Rutgers the State Univ of New Jersey .....	538	13	0	67	9	240	20	189
Seton Hall University .....	0	0	0	0	0	0	0	0
Stevens Institute of Technology .....	658	21	0	71	11	352	16	187
Univ of Med and Dentistry of New Jersey .....	0	0	0	0	0	0	0	0
William Paterson U of NJ .....	0	0	0	0	0	0	0	0
New York .....	6,600	235	7	624	168	2,469	605	2,492
Adelphi University .....	0	0	0	0	0	0	0	0
Albany Medical College .....	0	0	0	0	0	0	0	0
Alfred University .....	66	0	0	1	0	38	0	27
CUNY Bernard Baruch College .....	0	0	0	0	0	0	0	0
CUNY Brooklyn College .....	0	0	0	0	0	0	0	0
CUNY City College .....	180	35	0	36	20	33	8	48
CUNY College of Staten Island .....	0	0	0	0	0	0	0	0
CUNY Graduate School and Univ Center .....	117	13	0	5	4	17	0	78
CUNY Herbert H. Lehman College .....	0	0	0	0	0	0	0	0
CUNY Hunter College .....	0	0	0	0	0	0	0	0
CUNY John Jay College of Crim Justice .....	0	0	0	0	0	0	0	0
CUNY Mt. Sinai School of Medicine .....	0	0	0	0	0	0	0	0
CUNY Queens College .....	0	0	0	0	0	0	0	0
Clarkson University .....	127	1	4	0	0	37	0	85
College of New Rochelle .....	0	0	0	0	0	0	0	0
College of St Rose .....	0	0	0	0	0	0	0	0
Columbia Univ in the City of New York .....	623	5	0	87	8	163	31	329
Cooper Union .....	32	2	0	9	0	16	0	5
Cornell University .....	751	11	1	68	26	270	0	375
Fordham University .....	0	0	0	0	0	0	0	0
Hofstra University .....	0	0	0	0	0	0	0	0
Iona College .....	0	0	0	0	0	0	0	0
Ithaca College .....	0	0	0	0	0	0	0	0
Long Island University .....	0	0	0	0	0	0	0	0
Manhattan College .....	140	4	0	8	12	98	18	0
Marist College .....	0	0	0	0	0	0	0	0
New School University .....	0	0	0	0	0	0	0	0
New York Institute of Technology .....	298	60	0	44	20	174	0	0
New York Medical College .....	0	0	0	0	0	0	0	0
New York University .....	0	0	0	0	0	0	0	0
Niagara University .....	0	0	0	0	0	0	0	0
Pace University .....	0	0	0	0	0	0	0	0
Polytechnic University .....	722	25	0	57	20	100	348	172
Pratt Institute .....	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute .....	1,132	9	0	40	24	551	59	449
Rochester Institute of Technology .....	199	8	1	16	7	116	18	33
Russell Sage College .....	0	0	0	0	0	0	0	0
SUNY Health Science Center at Syracuse .....	0	0	0	0	0	0	0	0
SUNY College at Brockport .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
New York, continued:								
SUNY College at Buffalo .....	0	0	0	0	0	0	0	0
SUNY College at Cortland .....	0	0	0	0	0	0	0	0
SUNY College at Fredonia .....	0	0	0	0	0	0	0	0
SUNY College at Geneseo .....	0	0	0	0	0	0	0	0
SUNY College at Oneonta .....	0	0	0	0	0	0	0	0
SUNY College at Oswego .....	0	0	0	0	0	0	0	0
SUNY College at Plattsburgh .....	0	0	0	0	0	0	0	0
SUNY College at Potsdam .....	0	0	0	0	0	0	0	0
SUNY College of Env Science and Forestry .....	99	0	1	2	0	59	0	37
SUNY College of Optometry .....	0	0	0	0	0	0	0	0
SUNY Health Science Center at Brooklyn .....	0	0	0	0	0	0	0	0
SUNY Inst of Technology at Utica-Rome .....	0	0	0	0	0	0	0	0
SUNY at Albany .....	0	0	0	0	0	0	0	0
SUNY at Binghamton .....	237	12	0	17	4	108	1	95
SUNY at Buffalo .....	767	21	0	120	10	341	69	206
SUNY at New Paltz .....	6	0	0	2	1	1	0	2
SUNY at Stony Brook .....	305	14	0	23	5	108	2	153
Saint John's University .....	0	0	0	0	0	0	0	0
Sarah Lawrence College .....	0	0	0	0	0	0	0	0
St. Bonaventure University .....	0	0	0	0	0	0	0	0
Syracuse University .....	591	10	0	80	6	142	44	309
Teachers College, Columbia University .....	0	0	0	0	0	0	0	0
The Rockefeller University .....	0	0	0	0	0	0	0	0
Union College .....	28	0	0	2	1	22	0	3
University of Rochester .....	180	5	0	7	0	75	7	86
Vassar College .....	0	0	0	0	0	0	0	0
Wagner College .....	0	0	0	0	0	0	0	0
Yeshiva University .....	0	0	0	0	0	0	0	0
Pennsylvania .....	4,784	117	3	283	75	2,206	268	1,832
Allegheny University of Health Sciences .....	0	0	0	0	0	0	0	0
Bloomsburg University of Pennsylvania .....	0	0	0	0	0	0	0	0
Bryn Mawr College .....	0	0	0	0	0	0	0	0
Bucknell University .....	25	0	0	0	0	14	1	10
California University of Pennsylvania .....	0	0	0	0	0	0	0	0
Carnegie Mellon University .....	616	11	0	32	7	227	11	328
Clarion University of Pennsylvania .....	0	0	0	0	0	0	0	0
Drexel University .....	673	24	1	33	9	288	96	222
Duquesne University .....	0	0	0	0	0	0	0	0
East Stroudsburg Univ of Pennsylvania .....	0	0	0	0	0	0	0	0
Edinboro University of Pennsylvania .....	0	0	0	0	0	0	0	0
Gannon University .....	52	0	0	1	0	38	2	11
Indiana University of Pennsylvania .....	0	0	0	0	0	0	0	0
Kutztown University of Pennsylvania .....	0	0	0	0	0	0	0	0
Lehigh University .....	578	13	0	25	9	287	12	232
Mansfield University of Pennsylvania .....	0	0	0	0	0	0	0	0
Marywood University .....	0	0	0	0	0	0	0	0
Medical College of Pennsylvania, The .....	0	0	0	0	0	0	0	0
Millersville University of Pennsylvania .....	0	0	0	0	0	0	0	0
Pennsylvania State University .....	1,475	31	1	79	25	655	79	605
Philadelphia Col of Osteopathic Med .....	0	0	0	0	0	0	0	0
Philadelphia Coll of Pharmacy and Sci .....	0	0	0	0	0	0	0	0
Shippensburg University of Pennsylvania .....	0	0	0	0	0	0	0	0
Slippery Rock University of Pennsylvania .....	0	0	0	0	0	0	0	0
St Joseph's University .....	0	0	0	0	0	0	0	0
Swarthmore College .....	0	0	0	0	0	0	0	0
Temple University .....	65	4	0	24	4	27	0	6
Thomas Jefferson University .....	0	0	0	0	0	0	0	0
University of Pennsylvania .....	348	7	0	51	10	150	10	120
University of Pittsburgh .....	647	20	1	24	8	362	0	232
University of Scranton .....	0	0	0	0	0	0	0	0
Villanova University .....	209	2	0	4	2	107	57	37

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Pennsylvania, continued:								
West Chester University of Pennsylvania .....	0	0	0	0	0	0	0	0
Widener University .....	88	5	0	10	1	47	0	25
Wilkes University .....	8	0	0	0	0	4	0	4
East North Central .....	18,660	413	31	1,025	306	8,322	410	8,153
Illinois .....	4,470	115	4	404	106	1,712	78	2,051
Bradley University .....	216	1	0	18	0	84	25	88
Chicago School of Prof Psych .....	0	0	0	0	0	0	0	0
Chicago State University .....	0	0	0	0	0	0	0	0
DePaul University .....	0	0	0	0	0	0	0	0
Eastern Illinois University .....	0	0	0	0	0	0	0	0
Finch U of Hlth Sci/The Chicago Med Sch .....	0	0	0	0	0	0	0	0
Governors State University .....	0	0	0	0	0	0	0	0
Illinois Institute of Technology .....	734	31	1	81	30	290	7	294
Illinois State University .....	0	0	0	0	0	0	0	0
Loyola University of Chicago .....	0	0	0	0	0	0	0	0
Midwestern University .....	0	0	0	0	0	0	0	0
Northeastern Illinois University .....	0	0	0	0	0	0	0	0
Northern Illinois University .....	144	1	0	6	2	64	0	71
Northwestern University .....	638	22	1	54	11	284	7	259
Roosevelt University .....	29	7	0	3	0	12	2	5
Rush University .....	0	0	0	0	0	0	0	0
Southern Illinois Univ at Carbondale .....	187	12	0	6	1	52	3	113
Southern Illinois Univ at Edwardsville .....	135	5	0	4	1	58	0	67
Univ of Illinois at Urbana-Champaign .....	1,450	14	1	119	46	615	14	641
University of Chicago .....	0	0	0	0	0	0	0	0
University of Illinois at Chicago .....	937	22	1	113	15	253	20	513
University of Illinois at Springfield .....	0	0	0	0	0	0	0	0
Western Illinois University .....	0	0	0	0	0	0	0	0
Indiana .....	1,987	36	4	99	40	759	9	1,040
Ball State University .....	14	0	0	0	0	11	0	3
Butler University .....	0	0	0	0	0	0	0	0
Indiana State University .....	0	0	0	0	0	0	0	0
Indiana University .....	82	9	0	26	0	46	0	1
Indiana Wesleyan University .....	0	0	0	0	0	0	0	0
Purdue University .....	1,497	20	2	67	37	532	9	830
Rose-Hulman Institute of Technology .....	126	1	0	0	0	77	0	48
University of Evansville .....	0	0	0	0	0	0	0	0
University of Indianapolis .....	0	0	0	0	0	0	0	0
University of Notre Dame .....	268	6	2	6	3	93	0	158
University of Saint Francis .....	0	0	0	0	0	0	0	0
Valparaiso University .....	0	0	0	0	0	0	0	0
Michigan .....	5,148	137	9	320	69	2,684	152	1,777
Andrews University .....	0	0	0	0	0	0	0	0
Central Michigan University .....	0	0	0	0	0	0	0	0
Eastern Michigan University .....	0	0	0	0	0	0	0	0
Grand Valley State University .....	6	0	0	0	1	5	0	0
Michigan State University .....	494	17	0	27	11	156	10	273
Michigan Technological University .....	328	6	0	3	0	167	4	148
Northern Michigan University .....	0	0	0	0	0	0	0	0
Oakland University .....	642	15	0	33	4	434	18	138
University of Detroit Mercy .....	178	12	1	6	3	100	9	47
University of Michigan .....	2,270	47	5	160	43	1,268	67	680
Wayne State University .....	818	34	2	79	6	372	44	281
Western Michigan University .....	412	6	1	12	1	182	0	210
Ohio .....	4,980	98	8	123	52	1,967	155	2,577
Air Force Institute of Technology .....	207	0	0	1	2	101	12	91

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Ohio, continued:								
Antioch University .....	0	0	0	0	0	0	0	0
Bowling Green State University .....	0	0	0	0	0	0	0	0
Case Western Reserve University .....	543	6	1	22	1	222	19	272
Cleveland State University .....	202	22	2	4	7	101	31	35
John Carroll University .....	0	0	0	0	0	0	0	0
Kent State University .....	0	0	0	0	0	0	0	0
Medical College of Ohio .....	0	0	0	0	0	0	0	0
Miami University (OH) .....	10	0	0	7	1	2	0	0
Ohio State University .....	1,186	10	0	18	20	460	3	675
Ohio University .....	279	1	0	3	0	36	21	218
Union Institute .....	0	0	0	0	0	0	0	0
University of Akron .....	278	0	0	2	0	174	0	102
University of Cincinnati .....	1,053	22	2	27	8	341	15	638
University of Dayton .....	347	22	0	20	10	204	46	45
University of Toledo .....	506	6	2	5	1	123	3	366
Wright State University .....	307	7	1	14	2	162	5	116
Xavier University .....	0	0	0	0	0	0	0	0
Youngstown State University .....	62	2	0	0	0	41	0	19
Wisconsin .....	2,075	27	6	79	39	1,200	16	708
Marquette University .....	305	2	1	23	3	192	0	84
Medical College of Wisconsin .....	0	0	0	0	0	0	0	0
Milwaukee School of Engineering .....	413	6	2	9	5	378	0	13
University of Wisconsin-Eau Claire .....	0	0	0	0	0	0	0	0
University of Wisconsin-Green Bay .....	28	1	3	0	0	24	0	0
University of Wisconsin-La Crosse .....	0	0	0	0	0	0	0	0
University of Wisconsin-Madison .....	977	12	0	34	23	386	15	507
University of Wisconsin-Milwaukee .....	317	6	0	13	8	190	1	99
University of Wisconsin-Oshkosh .....	0	0	0	0	0	0	0	0
University of Wisconsin-Platteville .....	11	0	0	0	0	10	0	1
University of Wisconsin-River Falls .....	0	0	0	0	0	0	0	0
University of Wisconsin-Stevens Point .....	0	0	0	0	0	0	0	0
University of Wisconsin-Stout .....	24	0	0	0	0	20	0	4
University of Wisconsin-Whitewater .....	0	0	0	0	0	0	0	0
West North Central .....	5,432	61	8	228	45	2,359	173	2,558
Iowa .....	1,047	17	1	32	11	365	22	599
Drake University .....	0	0	0	0	0	0	0	0
Iowa State University .....	727	12	1	9	8	232	22	443
Loras College .....	0	0	0	0	0	0	0	0
Maharishi University of Management .....	0	0	0	0	0	0	0	0
Marycrest International Univ .....	0	0	0	0	0	0	0	0
Univ of Osteopathic Med & Health Sci .....	0	0	0	0	0	0	0	0
University of Iowa .....	320	5	0	23	3	133	0	156
University of Northern Iowa .....	0	0	0	0	0	0	0	0
Kansas .....	1,194	10	4	31	11	503	30	605
Emporia State University .....	0	0	0	0	0	0	0	0
Fort Hays State University .....	0	0	0	0	0	0	0	0
Kansas State University .....	309	1	0	2	1	129	0	176
Pittsburg State University .....	0	0	0	0	0	0	0	0
University of Kansas .....	452	5	3	14	6	236	30	158
Washburn University of Topeka .....	0	0	0	0	0	0	0	0
Wichita State University .....	433	4	1	15	4	138	0	271
Minnesota .....	1,202	9	1	61	8	579	36	508
Bemidji State University .....	0	0	0	0	0	0	0	0
Mayo Graduate School .....	5	0	0	1	0	3	0	1
Minnesota State University at Mankato .....	11	0	0	1	0	4	0	6

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Minnesota, continued:								
Moorhead State University .....	0	0	0	0	0	0	0	0
Saint Mary's University of Minnesota .....	0	0	0	0	0	0	0	0
St. Cloud State University .....	0	0	0	0	0	0	0	0
University of Minnesota .....	1,186	9	1	59	8	572	36	501
Walden University .....	0	0	0	0	0	0	0	0
Missouri .....	1,273	21	0	62	11	565	47	567
Central Missouri State University .....	31	1	0	10	0	17	1	2
Forest Institute of Professional Psych .....	0	0	0	0	0	0	0	0
Kirkville College of Osteopathic Med .....	0	0	0	0	0	0	0	0
Lincoln University .....	0	0	0	0	0	0	0	0
Northwest Missouri State University .....	0	0	0	0	0	0	0	0
Saint Louis University .....	15	0	0	0	1	1	4	9
Southeast Missouri State University .....	0	0	0	0	0	0	0	0
Southwest Missouri State University .....	11	0	0	0	0	5	0	6
Truman State University .....	0	0	0	0	0	0	0	0
University of Missouri-Columbia .....	285	4	0	7	2	82	0	190
University of Missouri-Kansas City .....	0	0	0	0	0	0	0	0
University of Missouri-Rolla .....	623	13	0	18	7	301	34	250
University of Missouri-St. Louis .....	0	0	0	0	0	0	0	0
Washington University .....	308	3	0	27	1	159	8	110
Nebraska .....	352	2	1	28	4	177	0	140
Creighton University .....	0	0	0	0	0	0	0	0
University of Nebraska - Lincoln .....	352	2	1	28	4	177	0	140
University of Nebraska - Omaha .....	0	0	0	0	0	0	0	0
University of Nebraska Medical Center .....	0	0	0	0	0	0	0	0
University of Nebraska at Kearney .....	0	0	0	0	0	0	0	0
North Dakota .....	119	2	0	9	0	74	6	28
North Dakota State University .....	85	1	0	4	0	50	6	24
University of North Dakota .....	34	1	0	5	0	24	0	4
South Dakota .....	245	0	1	5	0	96	32	111
South Dakota School of Mines and Tech .....	128	0	0	0	0	33	25	70
South Dakota State University .....	117	0	1	5	0	63	7	41
University of South Dakota .....	0	0	0	0	0	0	0	0
South Atlantic .....	17,982	1,018	42	1,205	635	8,781	490	5,811
Delaware .....	405	3	0	6	1	182	11	202
Delaware State University .....	0	0	0	0	0	0	0	0
University of Delaware .....	405	3	0	6	1	182	11	202
District of Columbia .....	1,510	157	3	114	35	644	81	476
American University .....	0	0	0	0	0	0	0	0
Catholic University of America .....	121	15	0	8	3	40	9	46
Gallaudet University .....	0	0	0	0	0	0	0	0
George Washington University .....	1,325	92	3	105	31	603	70	421
Georgetown University .....	0	0	0	0	0	0	0	0
Howard University .....	64	50	0	1	1	1	2	9
University of the District of Columbia .....	0	0	0	0	0	0	0	0
Florida .....	3,938	193	11	279	390	1,728	120	1,217
Embry-Riddle Aeronautical University .....	25	1	0	0	0	14	0	10
Florida A&M University .....	74	37	2	1	5	15	14	0
Florida Atlantic University .....	217	8	0	11	23	67	0	108
Florida Institute of Technology .....	229	5	0	7	12	112	0	93
Florida International University .....	262	9	0	12	105	51	85	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Florida, continued:								
Florida State University .....	171	48	1	42	10	56	2	12
Jacksonville University .....	0	0	0	0	0	0	0	0
Nova Southeastern University .....	0	0	0	0	0	0	0	0
Stetson University .....	0	0	0	0	0	0	0	0
University of Central Florida .....	745	21	0	50	55	373	0	246
University of Florida .....	1,357	38	6	61	78	667	5	502
University of Miami .....	240	7	1	23	44	95	11	59
University of South Florida .....	618	19	1	72	58	278	3	187
University of West Florida .....	0	0	0	0	0	0	0	0
Georgia .....	2,896	163	1	157	55	1,440	145	935
Atlanta University .....	0	0	0	0	0	0	0	0
Augusta State University .....	0	0	0	0	0	0	0	0
Clark Atlanta University .....	0	0	0	0	0	0	0	0
Emory University .....	0	0	0	0	0	0	0	0
Fort Valley State College .....	0	0	0	0	0	0	0	0
Georgia College and State University .....	0	0	0	0	0	0	0	0
Georgia Institute of Technology .....	2,666	160	1	149	51	1,374	0	931
Georgia Southern University .....	0	0	0	0	0	0	0	0
Georgia State University .....	0	0	0	0	0	0	0	0
Institute of Paper Science & Technology .....	74	2	0	7	4	57	0	4
Medical College of Georgia .....	0	0	0	0	0	0	0	0
Mercer University .....	137	0	0	0	0	0	137	0
Morehouse School of Medicine .....	0	0	0	0	0	0	0	0
State University of West Georgia .....	0	0	0	0	0	0	0	0
University of Georgia .....	19	1	0	1	0	9	8	0
Valdosta State University .....	0	0	0	0	0	0	0	0
Maryland .....	2,246	149	3	173	42	959	54	866
Coppin State College .....	0	0	0	0	0	0	0	0
Frostburg State University .....	0	0	0	0	0	0	0	0
Hood College .....	0	0	0	0	0	0	0	0
Johns Hopkins University .....	344	5	0	17	2	179	7	134
Loyola College .....	183	22	0	7	4	124	18	8
Morgan State University .....	33	24	0	0	0	3	0	6
Towson University .....	0	0	0	0	0	0	0	0
Uniformed Serv Univ of the Hlth Sciences .....	0	0	0	0	0	0	0	0
Univ of Maryland - Baltimore County .....	174	4	0	21	0	78	0	71
University of Baltimore .....	0	0	0	0	0	0	0	0
University of Maryland - College Park .....	1,512	94	3	128	36	575	29	647
University of Maryland Eastern Shore .....	0	0	0	0	0	0	0	0
University of Maryland at Baltimore .....	0	0	0	0	0	0	0	0
Washington College .....	0	0	0	0	0	0	0	0
North Carolina .....	2,227	195	3	167	26	1,100	37	699
Appalachian State University .....	0	0	0	0	0	0	0	0
Duke University .....	333	2	0	42	2	158	27	102
East Carolina University .....	0	0	0	0	0	0	0	0
North Carolina A&T State University .....	240	116	0	20	2	24	10	68
North Carolina Central University .....	0	0	0	0	0	0	0	0
North Carolina State University .....	1,410	68	3	84	18	779	0	458
Univ of North Carolina at Chapel Hill .....	71	4	0	5	3	48	0	11
Univ of North Carolina at Charlotte .....	164	4	0	15	1	86	0	58
Univ of North Carolina at Greensboro .....	0	0	0	0	0	0	0	0
University of North Carolina/Wilmington .....	0	0	0	0	0	0	0	0
Wake Forest University .....	9	1	0	1	0	5	0	2
Western Carolina University .....	0	0	0	0	0	0	0	0
South Carolina .....	890	20	0	64	8	426	22	350
Clemson University .....	600	11	0	5	6	295	11	272

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
South Carolina, continued:								
College of Charleston .....	0	0	0	0	0	0	0	0
Furman University .....	0	0	0	0	0	0	0	0
Medical University of South Carolina .....	0	0	0	0	0	0	0	0
University of South Carolina .....	290	9	0	59	2	131	11	78
Winthrop University .....	0	0	0	0	0	0	0	0
Virginia .....	3,172	123	21	212	71	1,884	15	846
College of William and Mary .....	40	1	0	1	1	24	0	13
Eastern Virginia Medical School .....	0	0	0	0	0	0	0	0
George Mason University .....	577	43	0	77	18	377	0	62
Hampton University .....	0	0	0	0	0	0	0	0
Hollins University .....	0	0	0	0	0	0	0	0
Institute of Textile Technology .....	27	1	0	0	0	26	0	0
James Madison University .....	0	0	0	0	0	0	0	0
Lynchburg College .....	0	0	0	0	0	0	0	0
Old Dominion University .....	346	17	1	9	5	166	15	133
Radford University .....	0	0	0	0	0	0	0	0
University of Richmond .....	0	0	0	0	0	0	0	0
University of Virginia .....	550	13	0	24	10	391	0	112
Virginia Commonwealth University .....	26	1	0	0	0	12	0	13
Virginia Polytechnic Inst and State Univ .....	1,606	47	20	101	37	888	0	513
Virginia State University .....	0	0	0	0	0	0	0	0
West Virginia .....	698	15	0	33	7	418	5	220
Marshall University .....	144	0	0	2	0	130	5	7
University of Charleston .....	0	0	0	0	0	0	0	0
West Virginia Graduate College .....	0	0	0	0	0	0	0	0
West Virginia University .....	538	15	0	17	7	286	0	213
West Virginia University Institute of Te .....	16	0	0	14	0	2	0	0
East South Central .....	4,199	234	10	214	33	2,281	47	1,380
Alabama .....	1,430	101	3	78	14	797	19	418
Alabama A&M University .....	0	0	0	0	0	0	0	0
Alabama State University .....	0	0	0	0	0	0	0	0
Auburn University .....	392	16	0	4	4	199	6	163
Jacksonville State University .....	0	0	0	0	0	0	0	0
Troy State University in Montgomery .....	0	0	0	0	0	0	0	0
Tuskegee University .....	51	23	0	0	0	0	6	22
University of Alabama at Birmingham, The .....	248	26	0	28	2	154	5	33
University of Alabama in Huntsville, The .....	401	24	3	11	6	294	0	63
University of Alabama, The .....	266	11	0	32	1	126	2	94
University of Montevallo .....	0	0	0	0	0	0	0	0
University of South Alabama .....	72	1	0	3	1	24	0	43
Kentucky .....	760	18	1	25	10	444	13	249
Eastern Kentucky University .....	0	0	0	0	0	0	0	0
Morehead State University .....	0	0	0	0	0	0	0	0
Murray State University .....	0	0	0	0	0	0	0	0
Spalding University .....	0	0	0	0	0	0	0	0
University of Kentucky .....	334	3	0	3	4	157	13	154
University of Louisville .....	426	15	1	22	6	287	0	95
Western Kentucky University .....	0	0	0	0	0	0	0	0
Mississippi .....	423	20	0	36	3	187	6	171
Jackson State University .....	0	0	0	0	0	0	0	0
Mississippi State University .....	331	16	0	20	3	155	0	137
Mississippi University for Women .....	0	0	0	0	0	0	0	0
University of Mississippi .....	92	4	0	16	0	32	6	34
University of Southern Mississippi .....	0	0	0	0	0	0	0	0
Tennessee .....	1,586	95	6	75	6	853	9	542
Austin Peay State University .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Tennessee, continued:								
East Tennessee State University .....	0	0	0	0	0	0	0	0
Fisk University .....	0	0	0	0	0	0	0	0
Meharry Medical College .....	0	0	0	0	0	0	0	0
Middle Tennessee State University .....	0	0	0	0	0	0	0	0
Tennessee State University .....	74	17	0	7	0	14	0	36
Tennessee Technological University .....	160	1	0	0	0	45	0	114
University of Memphis .....	236	23	0	26	0	115	6	66
University of Tennessee at Chattanooga .....	86	7	0	2	2	57	0	18
University of Tennessee at Knoxville .....	636	27	3	19	2	455	0	130
University of Tennessee, Memphis .....	39	2	0	1	1	13	1	21
Vanderbilt University .....	355	18	3	20	1	154	2	157
West South Central .....	10,152	212	47	750	374	3,898	260	4,611
Arkansas .....	534	24	3	27	11	277	39	153
Arkansas State University .....	0	0	0	0	0	0	0	0
University of Arkansas - Med Sci Campus .....	0	0	0	0	0	0	0	0
University of Arkansas Main .....	534	24	3	27	11	277	39	153
University of Arkansas at Little Rock .....	0	0	0	0	0	0	0	0
University of Central Arkansas .....	0	0	0	0	0	0	0	0
Louisiana .....	1,043	30	4	26	14	382	11	576
Grambling State University .....	0	0	0	0	0	0	0	0
Louisiana State University .....	588	17	4	14	6	175	8	364
Louisiana Tech University .....	171	0	0	1	0	69	0	101
Loyola University New Orleans .....	0	0	0	0	0	0	0	0
McNeese State University .....	24	0	0	4	1	19	0	0
Nicholls State University .....	0	0	0	0	0	0	0	0
Northeast Louisiana University .....	0	0	0	0	0	0	0	0
Northwestern State University .....	0	0	0	0	0	0	0	0
Southeastern Louisiana University .....	0	0	0	0	0	0	0	0
Southern University A & M, All Campuses .....	0	0	0	0	0	0	0	0
Tulane University .....	178	10	0	6	7	96	2	57
University of Southwestern Louisiana .....	82	3	0	1	0	23	1	54
Xavier University of Louisiana .....	0	0	0	0	0	0	0	0
Oklahoma .....	1,252	17	23	36	16	480	18	662
East Central University .....	0	0	0	0	0	0	0	0
Northeastern State University .....	50	3	10	0	0	33	4	0
Oklahoma State University .....	680	9	9	20	11	305	0	326
Oral Roberts University .....	0	0	0	0	0	0	0	0
Southwestern Oklahoma State University .....	0	0	0	0	0	0	0	0
University of Oklahoma .....	402	5	3	13	5	121	10	245
University of Tulsa .....	120	0	1	3	0	21	4	91
Texas .....	7,323	141	17	661	333	2,759	192	3,220
Abilene Christian University .....	0	0	0	0	0	0	0	0
Angelo State University .....	0	0	0	0	0	0	0	0
Baylor College of Dentistry .....	0	0	0	0	0	0	0	0
Baylor College of Medicine .....	0	0	0	0	0	0	0	0
Baylor University .....	0	0	0	0	0	0	0	0
Lamar University .....	117	3	0	1	3	17	2	91
Midwestern State University .....	0	0	0	0	0	0	0	0
Prairie View A&M University .....	39	16	0	3	0	3	0	17
Rice University .....	232	4	1	16	6	83	0	122
Sam Houston State University .....	0	0	0	0	0	0	0	0
Southern Methodist University .....	836	27	2	92	24	471	35	185
Southwest Texas State University .....	0	0	0	0	0	0	0	0
St. Mary's University .....	47	2	0	1	7	28	2	7
Stephen F. Austin State University .....	0	0	0	0	0	0	0	0
Sul Ross State University .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Texas, continued:								
Tarleton State University .....	0	0	0	0	0	0	0	0
Texas A&M University .....	1,439	23	0	41	46	487	130	712
Texas A&M University-Commerce .....	0	0	0	0	0	0	0	0
Texas A&M University-Corpus Christi .....	0	0	0	0	0	0	0	0
Texas A&M University-Kingsville .....	141	0	0	1	23	22	0	95
Texas Christian University .....	0	0	0	0	0	0	0	0
Texas Southern University .....	0	0	0	0	0	0	0	0
Texas Tech University .....	434	3	3	7	15	182	7	217
Texas Woman's University .....	0	0	0	0	0	0	0	0
Trinity University .....	0	0	0	0	0	0	0	0
U of North TX Hlth Sci Ctr at Ft Worth .....	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr San Antonio .....	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr at Houston .....	0	0	0	0	0	0	0	0
Univ of Texas M.D. Anderson Cancer Ctr .....	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston .....	0	0	0	0	0	0	0	0
Univ of Texas SW Medical Ctr at Dallas .....	27	1	0	15	1	10	0	0
University of Central Texas .....	0	0	0	0	0	0	0	0
University of Houston .....	626	14	1	188	28	214	8	173
University of Houston - Victoria .....	0	0	0	0	0	0	0	0
University of Houston Clear Lake .....	82	2	0	7	4	63	0	6
University of Incarnate Word .....	0	0	0	0	0	0	0	0
University of North Texas .....	22	1	0	0	0	12	1	8
University of Texas at Arlington .....	542	10	3	53	17	220	0	239
University of Texas at Austin .....	1,704	23	5	92	53	685	7	839
University of Texas at Dallas .....	695	7	0	128	13	162	0	385
University of Texas at El Paso .....	204	1	1	4	71	30	0	97
University of Texas at San Antonio .....	109	4	1	11	21	50	0	22
University of Texas at Tyler .....	6	0	0	1	0	5	0	0
University of Texas of the Permian Basin .....	0	0	0	0	0	0	0	0
University of Texas-Pan American .....	0	0	0	0	0	0	0	0
West Texas A&M University .....	21	0	0	0	1	15	0	5
Mountain .....	6,645	58	30	305	251	3,395	425	2,181
Arizona .....	1,704	16	4	95	66	667	57	799
Arizona State University .....	1,144	11	3	55	48	420	54	553
Northern Arizona University .....	0	0	0	0	0	0	0	0
University of Arizona .....	560	5	1	40	18	247	3	246
Colorado .....	2,340	30	9	133	67	1,411	120	570
Colorado School of Mines .....	300	0	2	11	8	160	5	114
Colorado State University .....	345	3	1	6	9	205	0	121
National Technological University .....	588	16	3	68	19	394	26	62
University of Colorado .....	1,081	11	3	40	31	635	88	273
University of Denver .....	26	0	0	8	0	17	1	0
University of Northern Colorado .....	0	0	0	0	0	0	0	0
Western State College .....	0	0	0	0	0	0	0	0
Idaho .....	317	1	1	11	13	222	3	66
Idaho State University .....	35	0	0	2	3	21	0	9
University of Idaho .....	282	1	1	9	10	201	3	57
Montana .....	179	0	3	2	1	131	7	35
Montana State University-Bozeman .....	128	0	2	1	1	84	5	35
Montana Tech of the Univ of Montana .....	51	0	1	1	0	47	2	0
University of Montana .....	0	0	0	0	0	0	0	0
Nevada .....	344	4	0	30	9	193	20	88
University of Nevada at Las Vegas .....	183	4	0	24	6	109	13	27

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Nevada, continued:								
University of Nevada, Reno .....	161	0	0	6	3	84	7	61
New Mexico .....	664	6	9	12	88	187	144	218
Eastern New Mexico University .....	0	0	0	0	0	0	0	0
New Mexico Highlands University .....	0	0	0	0	0	0	0	0
New Mexico Institute of Mining and Tech .....	63	0	0	0	3	21	0	39
New Mexico State University .....	269	2	2	5	38	0	137	85
University of New Mexico .....	332	4	7	7	47	166	7	94
Utah .....	978	1	4	22	6	517	59	369
Brigham Young University .....	174	1	0	11	3	138	3	18
University of Utah .....	460	0	3	10	3	192	56	196
Utah State University .....	344	0	1	1	0	187	0	155
Wyoming .....	119	0	0	0	1	67	15	36
University of Wyoming .....	119	0	0	0	1	67	15	36
Pacific .....	14,932	275	51	2,679	579	5,364	669	5,315
Alaska .....	114	2	3	9	0	77	3	20
University of Alaska Anchorage .....	44	0	3	5	0	34	2	0
University of Alaska Fairbanks .....	70	2	0	4	0	43	1	20
University of Alaska Southeast .....	0	0	0	0	0	0	0	0
California .....	12,438	247	37	2,408	546	4,240	585	4,375
Azusa Pacific University .....	0	0	0	0	0	0	0	0
Biola University .....	0	0	0	0	0	0	0	0
Cal Schl of Prof Psych Berkeley/Alameda .....	0	0	0	0	0	0	0	0
Calif Poly State Univ, San Luis Obispo .....	109	0	0	1	0	55	0	53
Calif Sch of Prof Psych - Fresno .....	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych - Los Angeles .....	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych - San Diego .....	0	0	0	0	0	0	0	0
Calif State Univ at Dominguez Hills .....	22	3	1	5	3	5	1	4
Calif State Univ at Fullerton .....	132	2	0	31	7	28	9	55
Calif State Univ at Los Angeles .....	128	7	0	52	20	17	4	28
Calif State University at Sacramento .....	331	7	6	85	47	101	36	49
Calif State University, Stanislaus .....	0	0	0	0	0	0	0	0
California Institute of Integral Studies .....	0	0	0	0	0	0	0	0
California Institute of Technology .....	384	4	0	30	11	153	0	186
California State Poly University, Pomona .....	231	2	1	92	8	71	23	34
California State Univ - Bakersfield .....	0	0	0	0	0	0	0	0
California State Univ, San Bernadino .....	0	0	0	0	0	0	0	0
California State University, Chico .....	6	0	0	1	0	2	1	2
California State University, Fresno .....	14	0	0	4	0	4	3	3
California State University, Hayward .....	0	0	0	0	0	0	0	0
California State University, Long Beach .....	349	12	2	103	38	113	24	57
California State University, Northridge .....	327	11	4	66	37	141	42	26
Chapman University .....	0	0	0	0	0	0	0	0
Charles R. Drew Univ of Medicine & Sci .....	0	0	0	0	0	0	0	0
Claremont Graduate School .....	0	0	0	0	0	0	0	0
Dominican College of San Rafael .....	0	0	0	0	0	0	0	0
Fielding Institute, The .....	0	0	0	0	0	0	0	0
Fuller Theological Seminary .....	0	0	0	0	0	0	0	0
Golden Gate University .....	0	0	0	0	0	0	0	0
Harvey Mudd College .....	6	0	0	1	0	5	0	0
Humboldt State University .....	52	0	1	1	3	37	8	2
John F Kennedy University .....	0	0	0	0	0	0	0	0
Loma Linda University .....	0	0	0	0	0	0	0	0
Loyola Marymount University .....	89	7	1	21	10	36	12	2
Monterey Inst of Intl Studies .....	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
California, continued:								
National University .....	164	8	0	34	8	93	4	17
Northrop University .....	0	0	0	0	0	0	0	0
Occidental College .....	0	0	0	0	0	0	0	0
Pacific Graduate School of Psychology .....	0	0	0	0	0	0	0	0
Pacific States University .....	0	0	0	0	0	0	0	0
Pepperdine University .....	0	0	0	0	0	0	0	0
RAND Graduate School of Policy Studies .....	0	0	0	0	0	0	0	0
San Diego State University .....	196	9	0	32	29	73	30	23
San Francisco State University .....	53	0	1	12	5	13	6	16
San Jose State University .....	814	20	1	427	28	138	69	131
Santa Clara University .....	423	6	1	135	18	135	44	84
Sonoma State University .....	0	0	0	0	0	0	0	0
Stanford University .....	2,405	47	6	357	88	924	45	938
US International University .....	0	0	0	0	0	0	0	0
US Naval Postgraduate School .....	396	2	0	19	2	174	0	199
University of Calif at Berkeley .....	1,451	40	4	216	52	590	53	496
University of Calif at Davis .....	595	8	3	79	22	284	39	160
University of Calif at Riverside .....	0	0	0	0	0	0	0	0
University of Calif at San Diego .....	444	5	1	57	17	203	26	135
University of Calif at San Francisco .....	35	4	0	6	4	21	0	0
University of Calif at Santa Barbara .....	409	3	1	30	7	182	22	164
University of Calif at Santa Cruz .....	79	1	0	10	1	30	6	31
University of California, Irvine .....	311	3	0	68	10	78	21	131
University of California, Los Angeles .....	751	14	3	183	26	206	36	283
University of La Verne .....	0	0	0	0	0	0	0	0
University of Redlands .....	0	0	0	0	0	0	0	0
University of San Diego .....	0	0	0	0	0	0	0	0
University of San Francisco .....	0	0	0	0	0	0	0	0
University of Southern California .....	1,732	22	0	250	45	328	21	1,066
University of the Pacific .....	0	0	0	0	0	0	0	0
West Coast University .....	0	0	0	0	0	0	0	0
Wright Institute, The .....	0	0	0	0	0	0	0	0
Hawaii .....	200	1	0	49	3	21	8	118
University of Hawaii at Manoa .....	200	1	0	49	3	21	8	118
Oregon .....	808	4	4	105	7	321	31	336
Oregon Grad Inst of Science & Technology .....	117	2	0	71	1	39	4	0
Oregon Health Sciences University .....	0	0	0	0	0	0	0	0
Oregon State University .....	388	1	3	17	1	146	12	208
Pacific University .....	0	0	0	0	0	0	0	0
Portland State University .....	290	1	1	17	5	135	15	116
Southern Oregon State College .....	0	0	0	0	0	0	0	0
University of Oregon .....	0	0	0	0	0	0	0	0
University of Portland .....	13	0	0	0	0	1	0	12
Washington .....	1,372	21	7	108	23	705	42	466
Central Washington University .....	0	0	0	0	0	0	0	0
Eastern Washington University .....	0	0	0	0	0	0	0	0
Gonzaga University .....	2	0	0	0	0	0	0	2
Pacific Lutheran University .....	0	0	0	0	0	0	0	0
Saint Martin's College .....	13	0	0	2	0	11	0	0
Seattle University .....	74	5	2	11	1	36	9	10
University of Washington .....	1,015	14	5	92	19	533	33	319
Walla Walla College .....	0	0	0	0	0	0	0	0
Washington State University .....	268	2	0	3	3	125	0	135
Western Washington University .....	0	0	0	0	0	0	0	0
Whitworth College .....	0	0	0	0	0	0	0	0
Outlying Areas .....	267	0	0	0	218	1	0	48

See explanatory information, if any, and SOURCE at end of table.

**Table 32. Graduate engineering students in all institutions, by geographic division, State, institution, and citizenship, and by racial/ethnic background of U.S. citizens or permanent residents: 1998**

Division, State, and institution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Guam .....	0	0	0	0	0	0	0	0
University of Guam .....	0	0	0	0	0	0	0	0
Puerto Rico .....	267	0	0	0	218	1	0	48
Caribbean Center for Advanced Studies .....	0	0	0	0	0	0	0	0
Ponce School of Medicine .....	0	0	0	0	0	0	0	0
The Pontifical Cath Univ of Puerto Rico .....	0	0	0	0	0	0	0	0
Univ of Puerto Rico Mayaguez Campus .....	267	0	0	0	218	1	0	48
Univ of Puerto Rico Rio Piedras Campus .....	0	0	0	0	0	0	0	0
University of Puerto Rico Med Sci Campus .....	0	0	0	0	0	0	0	0

**NOTE:** Includes medical schools

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 33. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	416,646	435,696	443,757	444,093	438,306	432,812	426,032	422,834
Total, science and engineering fields .....	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
Sciences, total .....	260,757	272,133	277,035	276,789	273,727	271,056	265,720	263,134
Physical sciences, total .....	33,007	33,691	33,583	32,768	31,791	30,832	29,652	29,120
Astronomy .....	829	869	880	973	912	874	778	820
Chemistry .....	18,384	18,916	19,072	18,760	18,540	18,321	17,774	17,403
Physics .....	13,600	13,692	13,423	12,752	12,073	11,404	10,901	10,588
Physical sciences, n.e.c. ....	194	214	208	283	266	233	199	309
Earth, atmos., & ocean sci., total .....	13,209	13,855	14,134	14,327	14,144	13,682	12,986	12,760
Atmospheric sciences .....	956	1,076	1,095	1,090	1,062	1,079	1,081	954
Geosciences .....	7,131	7,305	7,360	7,299	7,156	6,875	6,543	6,274
Oceanography .....	2,274	2,402	2,473	2,678	2,549	2,462	2,313	2,395
Earth, atmos., & ocean sci., n.e.c. ....	2,848	3,072	3,206	3,260	3,377	3,266	3,049	3,137
Mathematical sciences, total .....	17,910	18,242	17,763	17,440	16,408	15,995	14,833	14,438
Mathematics & applied mathematics .....	15,212	15,356	14,786	14,402	13,380	13,003	12,202	11,848
Statistics .....	2,698	2,886	2,977	3,038	3,028	2,992	2,631	2,590
Computer sciences .....	28,423	29,900	30,220	28,866	28,270	29,111	30,092	31,067
Agricultural sciences .....	10,847	11,183	11,252	11,474	11,593	11,229	11,078	11,021
Biological sciences, total .....	48,284	50,375	52,275	53,833	54,109	53,680	52,870	52,704
Anatomy .....	1,051	1,030	1,027	1,079	1,056	1,111	1,094	1,015
Biochemistry .....	5,160	5,333	5,455	5,567	5,493	5,203	5,040	5,085
Biology .....	10,628	11,068	11,308	11,188	11,004	11,312	11,502	11,090
Biometry/epidemiology .....	2,031	2,365	2,658	2,710	2,812	3,001	2,900	3,484
Biophysics .....	697	751	780	794	845	833	748	737
Botany .....	2,673	2,665	2,705	2,741	2,605	2,501	2,396	2,319
Cell biology .....	2,809	3,093	3,362	3,753	3,874	3,870	3,807	3,902
Ecology .....	1,079	1,155	1,251	1,420	1,508	1,497	1,511	1,561
Entomology/parasitology .....	1,171	1,193	1,247	1,263	1,241	1,234	1,161	1,168
Genetics .....	1,478	1,599	1,733	1,649	1,651	1,679	1,713	1,660
Microbio., immunology, & virology .....	4,890	4,932	5,037	5,114	5,045	4,937	4,829	4,802
Nutrition .....	3,936	3,866	4,034	4,244	4,449	4,365	4,224	4,062
Pathology .....	1,378	1,379	1,485	1,603	1,575	1,583	1,621	1,514
Pharmacology .....	2,432	2,529	2,643	2,830	2,700	2,652	2,582	2,694
Physiology .....	2,332	2,317	2,372	2,378	2,540	2,377	2,298	2,169
Zoology .....	2,168	2,117	2,115	2,085	2,063	1,907	1,723	1,670
Biosciences, n.e.c. ....	2,371	2,983	3,063	3,415	3,648	3,618	3,721	3,772
Psychology, total .....	38,585	40,011	40,326	40,399	39,721	39,417	39,884	39,789
Psychology, general .....	13,537	13,474	12,957	12,688	12,143	11,333	11,773	11,946
Clinical psychology .....	9,658	10,635	10,969	10,966	11,007	11,311	11,588	11,470
Psychology, n.e.c. ....	15,390	15,902	16,400	16,745	16,571	16,773	16,523	16,373
Social sciences, total .....	70,492	74,876	77,482	77,682	77,691	77,110	74,325	72,235
Agricultural economics .....	2,311	2,454	2,334	2,222	2,292	2,085	2,015	1,965
Anthropology (cultural & social) .....	6,480	6,862	7,114	7,414	7,419	7,491	7,238	7,213
Economics (except agricultural) .....	11,946	12,400	12,415	12,197	11,933	11,369	10,507	10,107
Geography .....	3,203	3,504	3,751	3,863	3,834	3,827	3,760	3,763
History and philosophy of science .....	337	360	369	387	401	409	443	449
Linguistics .....	3,135	2,930	2,947	2,937	2,857	2,848	2,733	2,610
Political science .....	26,280	28,197	29,390	28,596	28,304	27,482	26,027	25,034
Sociology .....	7,489	8,003	8,347	8,359	8,385	8,249	8,170	7,832
Sociology/anthropology .....	824	902	841	877	840	850	874	850
Social sciences, n.e.c. ....	8,487	9,264	9,974	10,830	11,426	12,500	12,558	12,412
Engineering, total .....	105,690	109,790	109,003	105,741	100,146	96,662	94,704	93,785
Aerospace engineering .....	4,053	3,999	3,905	3,653	3,287	3,140	3,029	3,096
Agricultural engineering .....	983	1,008	1,018	1,061	1,037	1,012	941	925
Biomedical engineering .....	2,191	2,485	2,613	2,674	2,662	2,685	2,785	2,850
Chemical engineering .....	7,002	7,259	7,396	7,502	7,310	7,258	7,125	6,950
Civil engineering .....	16,122	18,035	18,015	18,407	17,795	17,231	15,920	15,335
Electrical engineering .....	32,313	33,416	32,546	30,529	28,242	27,373	28,292	28,897
Engineering science .....	2,124	2,185	2,148	2,069	1,945	1,741	1,636	1,685
Industrial/manufacturing eng. ....	11,520	12,371	12,467	12,575	11,981	11,350	10,668	10,082
Mechanical engineering .....	16,638	17,538	17,461	16,886	15,625	14,753	14,279	13,868
Metallurgical/materials eng. ....	5,035	5,353	5,216	5,071	4,821	4,643	4,572	4,567
Mining engineering .....	475	426	411	399	362	351	333	290
Nuclear engineering .....	1,282	1,286	1,306	1,246	1,154	980	868	821
Petroleum engineering .....	699	729	717	612	594	551	557	567
Engineering, n.e.c. ....	5,253	3,700	3,784	3,057	3,331	3,594	3,699	3,852

See explanatory information, if any, and SOURCE at end of table.

**Table 33. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, health fields .....	50,199	53,773	57,719	61,563	64,433	65,094	65,608	65,915
Medical fields, total .....	11,218	11,978	13,349	14,182	14,725	14,587	14,438	15,471
Anesthesiology .....	443	511	494	516	529	647	616	650
Cardiology .....	2	8	11	14	19	18	48	51
Oncology/cancer research .....	156	197	209	208	189	185	198	209
Endocrinology .....	66	71	63	63	53	46	43	58
Gastroenterology .....	0	0	1	0	0	0	3	6
Hematology .....	4	5	3	2	1	3	3	1
Neurology .....	1,003	1,149	1,311	1,455	1,554	1,632	1,696	1,765
Obstetrics and gynecology .....	10	3	3	4	6	4	18	13
Ophthalmology .....	32	27	19	32	30	33	33	38
Otorhinolaryngology .....	3	0	1	2	0	0	2	0
Pediatrics .....	153	154	196	261	238	275	342	314
Preventive medicine/community health .....	8,183	8,533	9,595	10,078	10,575	10,205	9,824	10,787
Psychiatry .....	46	96	103	144	158	131	135	86
Pulmonary disease .....	0	0	0	0	0	0	0	0
Radiology .....	233	252	287	320	268	227	221	191
Surgery .....	69	76	82	119	174	167	221	174
Clinical medicine, n.e.c. ....	815	896	971	964	931	1,014	1,035	1,128
Other health fields, total .....	38,981	41,795	44,370	47,381	49,708	50,507	51,170	50,444
Dental sciences .....	1,016	1,121	1,135	1,199	1,251	1,291	1,411	1,471
Nursing .....	18,949	19,938	20,801	22,688	23,564	22,314	21,765	20,185
Pharmaceutical sciences .....	2,967	2,788	2,851	2,890	2,926	2,947	3,034	3,262
Speech pathology/audiology .....	6,773	7,562	8,050	8,476	8,735	9,234	9,490	9,502
Veterinary sciences .....	875	923	853	858	915	932	1,160	1,174
Health related, n.e.c. ....	8,401	9,463	10,680	11,270	12,317	13,789	14,310	14,850

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 34. Graduate students in science, engineering, and health fields in public doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	290,576	303,933	308,998	309,414	305,230	300,788	295,475	292,008
Total, science and engineering fields .....	252,914	263,653	266,725	264,381	258,632	253,137	247,769	244,729
Sciences, total .....	178,187	185,601	188,877	188,828	186,843	184,061	180,244	177,798
Physical sciences, total .....	23,716	24,260	24,262	23,666	23,104	22,319	21,464	21,232
Astronomy .....	546	561	579	591	556	525	471	509
Chemistry .....	13,132	13,589	13,758	13,560	13,503	13,298	12,974	12,781
Physics .....	9,844	9,896	9,717	9,249	8,798	8,269	7,825	7,646
Physical sciences, n.e.c. ....	194	214	208	266	247	227	194	296
Earth, atmos., & ocean sci., total .....	10,769	11,322	11,562	11,610	11,717	11,396	10,873	10,659
Atmospheric sciences .....	936	1,051	1,077	1,071	1,037	1,059	1,057	933
Geosciences .....	5,771	5,917	5,959	5,885	5,827	5,615	5,348	5,088
Oceanography .....	1,841	1,948	1,996	2,119	2,109	2,048	1,922	2,012
Earth, atmos., & ocean sci., n.e.c. ....	2,221	2,406	2,530	2,535	2,744	2,674	2,546	2,626
Mathematical sciences .....	13,729	13,946	13,576	13,224	12,327	12,030	11,105	10,701
Computer sciences .....	16,847	17,490	17,708	17,149	17,118	17,278	18,337	18,665
Agricultural sciences .....	10,370	10,731	10,815	11,036	11,184	10,825	10,703	10,638
Biological sciences, total .....	35,116	36,667	37,955	39,005	38,747	38,331	37,549	37,478
Anatomy .....	765	742	760	805	779	793	778	701
Biochemistry .....	3,537	3,648	3,670	3,873	3,856	3,693	3,580	3,597
Biology .....	7,362	7,696	7,931	7,871	7,559	7,832	7,908	7,575
Biometry/epidemiology .....	1,225	1,562	1,728	1,732	1,724	1,777	1,734	2,138
Biophysics .....	387	417	426	415	472	459	419	417
Botany .....	2,505	2,539	2,566	2,621	2,466	2,364	2,253	2,183
Cell biology .....	1,587	1,824	2,077	2,270	2,342	2,371	2,333	2,492
Ecology .....	991	1,066	1,162	1,314	1,406	1,399	1,421	1,472
Entomology/parasitology .....	1,102	1,127	1,186	1,193	1,179	1,171	1,101	1,109
Genetics .....	1,058	1,133	1,147	1,083	1,077	1,119	1,144	1,075
Microbio., immunology, & virology .....	3,555	3,545	3,577	3,611	3,548	3,446	3,362	3,307
Nutrition .....	3,339	3,250	3,301	3,464	3,596	3,518	3,399	3,351
Pathology .....	987	982	982	1,046	1,023	1,026	1,010	1,008
Pharmacology .....	1,672	1,757	1,871	1,979	1,872	1,797	1,750	1,810
Physiology .....	1,530	1,526	1,559	1,521	1,548	1,439	1,373	1,359
Zoology .....	2,017	1,979	1,976	1,951	1,914	1,780	1,598	1,558
Biosciences, n.e.c. ....	1,497	1,874	2,036	2,256	2,386	2,347	2,386	2,326
Psychology .....	19,679	20,487	20,276	20,224	20,199	19,569	20,127	19,898
Social sciences, total .....	47,961	50,698	52,723	52,914	52,447	52,313	50,086	48,527
Agricultural economics .....	2,196	2,336	2,222	2,107	2,159	1,999	1,945	1,898
Anthropology (cultural & social) .....	4,714	4,944	5,210	5,395	5,328	5,396	5,172	5,150
Economics (except agricultural) .....	7,695	7,992	8,100	7,998	7,723	7,347	6,743	6,384
Geography .....	3,004	3,201	3,425	3,529	3,540	3,509	3,467	3,455
Linguistics .....	2,092	2,095	2,112	2,077	2,046	1,973	1,893	1,824
Political science .....	16,311	17,270	17,898	17,135	16,794	16,191	15,168	14,413
Sociology .....	5,650	5,923	6,171	6,174	6,180	6,136	6,049	5,899
Sociology/anthropology .....	543	622	652	694	652	669	709	693
Social sciences, other .....	5,756	6,315	6,933	7,805	8,025	9,093	8,940	8,811
Engineering, total .....	74,727	78,052	77,848	75,553	71,789	69,076	67,525	66,931
Aerospace engineering .....	3,213	3,173	3,102	2,872	2,549	2,399	2,310	2,295
Agricultural engineering .....	943	967	970	1,006	981	959	893	880
Biomedical engineering .....	1,282	1,497	1,601	1,601	1,620	1,671	1,824	1,842
Chemical engineering .....	5,082	5,322	5,446	5,523	5,361	5,269	5,101	4,992
Civil engineering .....	12,205	13,651	13,612	13,746	13,419	13,073	12,188	11,673
Electrical engineering .....	20,877	21,904	21,556	20,559	19,265	18,244	18,886	19,072
Engineering science .....	1,357	1,456	1,419	1,359	1,287	1,246	1,117	1,063
Industrial/manufacturing eng. ....	7,939	8,685	8,841	8,814	8,198	7,766	7,250	7,216
Mechanical engineering .....	12,200	13,054	12,930	12,505	11,695	11,151	10,713	10,684
Metallurgical/materials eng. ....	3,378	3,672	3,646	3,596	3,395	3,266	3,215	3,164
Nuclear engineering .....	1,093	1,081	1,094	1,062	975	826	751	715
Engineering, other .....	5,158	3,590	3,631	2,910	3,044	3,206	3,277	3,335
Total, health fields .....	37,662	40,280	42,273	45,033	46,598	47,651	47,706	47,279
Clinical fields .....	1,280	1,456	1,510	1,675	1,630	1,751	1,870	1,844
Dental sciences .....	791	840	862	919	925	992	1,090	1,170
Nursing .....	14,810	15,609	16,333	18,116	18,654	17,881	17,451	16,193
Pharmaceutical sciences .....	2,243	2,258	2,349	2,335	2,385	2,429	2,488	2,578
Preventive medicine/community health .....	5,687	5,875	6,479	6,570	6,979	6,820	6,433	6,945
Speech pathology/audiology .....	5,702	6,269	6,419	6,770	6,919	7,399	7,537	7,423
Veterinary sciences .....	821	880	802	807	875	894	1,123	1,139
Other health fields .....	6,328	7,093	7,519	7,841	8,231	9,485	9,714	9,987

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 35. Graduate students in science, engineering, and health fields in private doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	126,070	131,763	134,759	134,679	133,076	132,024	130,557	130,826
Total, science and engineering fields .....	113,533	118,270	119,313	118,149	115,241	114,581	112,655	112,190
Sciences, total .....	82,570	86,532	88,158	87,961	86,884	86,995	85,476	85,336
Physical sciences, total .....	9,291	9,431	9,321	9,102	8,687	8,513	8,188	7,888
Astronomy .....	283	308	301	382	356	349	307	311
Chemistry .....	5,252	5,327	5,314	5,200	5,037	5,023	4,800	4,622
Physics .....	3,756	3,796	3,706	3,503	3,275	3,135	3,076	2,942
Physical sciences, n.e.c. ....	0	0	0	17	19	6	5	13
Earth, atmos., & ocean sci., total .....	2,440	2,533	2,572	2,717	2,427	2,286	2,113	2,101
Atmospheric sciences .....	20	25	18	19	25	20	24	21
Geosciences .....	1,360	1,388	1,401	1,414	1,329	1,260	1,195	1,186
Oceanography .....	433	454	477	559	440	414	391	383
Earth, atmos., & ocean sci., n.e.c. ....	627	666	676	725	633	592	503	511
Mathematical sciences .....	4,181	4,296	4,187	4,216	4,081	3,965	3,728	3,737
Computer sciences .....	11,576	12,410	12,512	11,717	11,152	11,833	11,755	12,402
Agricultural sciences .....	477	452	437	438	409	404	375	383
Biological sciences, total .....	13,168	13,708	14,320	14,828	15,362	15,349	15,321	15,226
Anatomy .....	286	288	267	274	277	318	316	314
Biochemistry .....	1,623	1,685	1,785	1,694	1,637	1,510	1,460	1,488
Biology .....	3,266	3,372	3,377	3,317	3,445	3,480	3,594	3,515
Biometry/epidemiology .....	806	803	930	978	1,088	1,224	1,166	1,346
Biophysics .....	310	334	354	379	373	374	329	320
Botany .....	168	126	139	120	139	137	143	136
Cell biology .....	1,222	1,269	1,285	1,483	1,532	1,499	1,474	1,410
Ecology .....	88	89	89	106	102	98	90	89
Entomology/parasitology .....	69	66	61	70	62	63	60	59
Genetics .....	420	466	586	566	574	560	569	585
Microbio., immunology, & virology .....	1,335	1,387	1,460	1,503	1,497	1,491	1,467	1,495
Nutrition .....	597	616	733	780	853	847	825	711
Pathology .....	391	397	503	557	552	557	611	506
Pharmacology .....	760	772	772	851	828	855	832	884
Physiology .....	802	791	813	857	992	938	925	810
Zoology .....	151	138	139	134	149	127	125	112
Biosciences, n.e.c. ....	874	1,109	1,027	1,159	1,262	1,271	1,335	1,446
Psychology .....	18,906	19,524	20,050	20,175	19,522	19,848	19,757	19,891
Social sciences, total .....	22,531	24,178	24,759	24,768	25,244	24,797	24,239	23,708
Agricultural economics .....	115	118	112	115	133	86	70	67
Anthropology (cultural & social) .....	1,766	1,918	1,904	2,019	2,091	2,095	2,066	2,063
Economics (except agricultural) .....	4,251	4,408	4,315	4,199	4,210	4,022	3,764	3,723
Geography .....	199	303	326	334	294	318	293	308
Linguistics .....	1,043	835	835	860	811	875	840	786
Political science .....	9,969	10,927	11,492	11,461	11,510	11,291	10,859	10,621
Sociology .....	1,839	2,080	2,176	2,185	2,205	2,113	2,121	1,933
Sociology/anthropology .....	281	280	189	183	188	181	165	157
Social sciences, other .....	3,068	3,309	3,410	3,412	3,802	3,816	4,061	4,050
Engineering, total .....	30,963	31,738	31,155	30,188	28,357	27,586	27,179	26,854
Aerospace engineering .....	840	826	803	781	738	741	719	801
Agricultural engineering .....	40	41	48	55	56	53	48	45
Biomedical engineering .....	909	988	1,012	1,073	1,042	1,014	961	1,008
Chemical engineering .....	1,920	1,937	1,950	1,979	1,949	1,989	2,024	1,958
Civil engineering .....	3,917	4,384	4,403	4,661	4,376	4,158	3,732	3,662
Electrical engineering .....	11,436	11,512	10,990	9,970	8,977	9,129	9,406	9,825
Engineering science .....	767	729	729	710	658	495	519	622
Industrial/manufacturing eng. ....	3,581	3,686	3,626	3,761	3,783	3,584	3,418	2,866
Mechanical engineering .....	4,438	4,484	4,531	4,381	3,930	3,602	3,566	3,184
Metallurgical/materials eng. ....	1,657	1,681	1,570	1,475	1,426	1,377	1,357	1,403
Nuclear engineering .....	189	205	212	184	179	154	117	106
Engineering, other .....	1,269	1,265	1,281	1,158	1,243	1,290	1,312	1,374
Total, health fields .....	12,537	13,493	15,446	16,530	17,835	17,443	17,902	18,636
Clinical fields .....	752	840	933	974	966	999	1,048	1,075
Dental sciences .....	225	281	273	280	326	299	321	301
Nursing .....	4,139	4,329	4,468	4,572	4,910	4,433	4,314	3,992
Pharmaceutical sciences .....	724	530	502	555	541	518	546	684
Preventive medicine/community health .....	2,496	2,658	3,116	3,508	3,596	3,385	3,391	3,842
Speech pathology/audiology .....	1,071	1,293	1,631	1,706	1,816	1,835	1,953	2,079
Veterinary sciences .....	54	43	51	51	40	38	37	35
Other health fields .....	3,076	3,519	4,472	4,884	5,640	5,936	6,292	6,628

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 36. Graduate students in science and engineering fields in doctorate-granting institutions, by enrollment status, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1991-1998**

Enrollment status, citizenship, and racial/ethnic background	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total enrollment .....	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
Total U.S. citizens .....	263,312	277,651	285,049	284,700	279,330	273,855	265,838	259,926
Black, non-Hispanic .....	10,577	11,997	13,004	13,504	14,010	14,488	14,489	14,567
American Indian/Alaskan Native .....	937	1,030	1,099	1,199	1,277	1,316	1,364	1,370
Asian/Pacific Islander .....	15,488	18,264	20,660	23,062	22,414	22,514	22,470	22,625
Hispanic .....	9,518	10,504	11,399	11,359	11,962	12,393	12,710	12,971
White, non-Hispanic .....	214,099	222,593	224,913	223,867	215,434	209,252	200,235	193,691
Other or unknown .....	12,693	13,263	13,974	11,709	14,233	13,892	14,570	14,702
Students with temporary visas .....	103,135	104,272	100,989	97,830	94,543	93,863	94,586	96,993
Full-time enrollment .....	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Total U.S. citizens .....	172,601	183,353	189,678	191,755	188,722	185,548	180,435	176,474
Black, non-Hispanic .....	6,585	7,638	8,421	8,920	9,058	9,210	9,355	9,260
American Indian/Alaskan Native .....	636	743	812	871	956	977	998	985
Asian/Pacific Islander .....	10,529	12,395	14,238	16,110	15,655	15,645	15,678	16,017
Hispanic .....	6,461	6,990	7,510	7,517	8,306	8,475	8,701	8,985
White, non-Hispanic .....	141,615	148,368	150,841	151,887	146,811	143,430	137,428	132,907
Other or unknown .....	6,775	7,219	7,856	6,450	7,936	7,811	8,275	8,320
Students with temporary visas .....	88,815	90,055	86,931	83,857	80,948	80,974	82,176	84,051
Part-time enrollment .....	105,031	108,515	109,429	106,918	104,203	101,196	97,813	96,394
Total U.S. citizens .....	90,711	94,298	95,371	92,945	90,608	88,307	85,403	83,452
Black, non-Hispanic .....	3,992	4,359	4,583	4,584	4,952	5,278	5,134	5,307
American Indian/Alaskan Native .....	301	287	287	328	321	339	366	385
Asian/Pacific Islander .....	4,959	5,869	6,422	6,952	6,759	6,869	6,792	6,608
Hispanic .....	3,057	3,514	3,889	3,842	3,656	3,918	4,009	3,986
White, non-Hispanic .....	72,484	74,225	74,072	71,980	68,623	65,822	62,807	60,784
Other or unknown .....	5,918	6,044	6,118	5,259	6,297	6,081	6,295	6,382
Students with temporary visas .....	14,320	14,217	14,058	13,973	13,595	12,889	12,410	12,942

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 37. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields .....	422,834	18,356	1,722	26,855	15,792	241,013	17,231	101,865
Total, science and engineering fields .....	356,919	14,567	1,370	22,625	12,971	193,691	14,702	96,993
Sciences, total .....	263,134	12,114	1,174	15,706	10,344	152,735	10,919	60,142
Physical sciences, total .....	29,120	773	60	1,614	797	14,522	968	10,386
Astronomy .....	820	9	2	32	12	507	45	213
Chemistry .....	17,403	536	43	1,049	540	8,971	508	5,756
Physics .....	10,588	218	14	516	220	4,878	373	4,369
Physical sciences, n.e.c. ....	309	10	1	17	25	166	42	48
Earth, atmos., & ocean sci., total .....	12,760	175	69	372	317	8,916	481	2,430
Atmospheric sciences .....	954	8	2	54	13	596	30	251
Geosciences .....	6,274	58	34	142	127	4,436	247	1,230
Oceanography .....	2,395	24	16	58	103	1,598	68	528
Earth, atmos., & ocean sci., n.e.c. ....	3,137	85	17	118	74	2,286	136	421
Mathematical sciences .....	14,438	454	30	924	344	7,090	531	5,065
Computer sciences .....	31,067	1,004	83	3,867	589	11,478	1,596	12,450
Agricultural sciences .....	11,021	212	57	272	337	7,336	256	2,551
Biological sciences, total .....	52,704	1,853	171	4,154	1,796	31,705	1,872	11,153
Anatomy .....	1,015	41	3	81	15	634	37	204
Biochemistry .....	5,085	140	13	514	156	2,712	126	1,424
Biology .....	11,090	523	36	624	471	6,906	604	1,926
Biometry/epidemiology .....	3,484	181	6	357	153	1,883	227	677
Biophysics .....	737	18	1	90	14	377	71	166
Botany .....	2,319	58	3	92	56	1,374	63	673
Cell biology .....	3,902	102	11	411	119	2,334	107	818
Ecology .....	1,561	16	5	46	40	1,251	33	170
Entomology/parasitology .....	1,168	11	3	37	26	778	22	291
Genetics .....	1,660	43	3	123	51	1,027	32	381
Microbio., immunology, & virology .....	4,802	174	18	437	184	2,856	144	989
Nutrition .....	4,062	172	14	227	148	2,394	74	1,033
Pathology .....	1,514	39	10	162	38	919	61	285
Pharmacology .....	2,694	120	6	297	88	1,557	57	569
Physiology .....	2,169	95	10	265	70	1,238	53	438
Zoology .....	1,670	17	9	62	36	1,277	73	196
Biosciences, n.e.c. ....	3,772	103	20	329	131	2,188	88	913
Psychology .....	39,789	2,499	248	1,612	2,505	29,079	1,876	1,970
Social sciences, total .....	72,235	5,144	456	2,891	3,659	42,609	3,339	14,137
Agricultural economics .....	1,965	46	5	54	42	858	60	900
Anthropology (cultural & social) .....	7,213	253	115	221	304	5,342	253	725
Economics (except agricultural) .....	10,107	256	16	542	251	3,629	363	5,050
Geography .....	3,763	87	10	86	82	2,758	209	531
Linguistics .....	2,610	45	8	147	130	1,235	102	943
Political science .....	25,034	2,471	133	962	1,554	15,369	1,215	3,330
Sociology .....	7,832	736	63	369	484	4,879	245	1,056
Sociology/anthropology .....	850	92	8	9	41	523	67	110
Social sciences, other .....	12,861	1,158	98	501	771	8,016	825	1,492
Engineering, total .....	93,785	2,453	196	6,919	2,627	40,956	3,783	36,851
Aerospace engineering .....	3,096	33	7	138	74	1,372	70	1,402
Agricultural engineering .....	925	27	4	43	15	403	27	406
Biomedical engineering .....	2,850	86	7	265	79	1,577	113	723
Chemical engineering .....	6,950	172	21	450	174	3,077	220	2,836
Civil engineering .....	15,335	367	33	917	637	8,057	544	4,780
Electrical engineering .....	28,897	746	30	2,920	719	9,675	1,306	13,501
Engineering science .....	1,685	38	6	187	42	832	28	552
Industrial/manufacturing eng. ....	10,082	399	14	531	329	4,953	566	3,290
Mechanical engineering .....	13,868	336	24	885	360	6,264	541	5,458
Metallurgical/materials eng. ....	4,567	72	32	258	81	2,021	122	1,981
Nuclear engineering .....	821	13	2	36	22	449	5	294
Engineering, other .....	4,709	164	16	289	95	2,276	241	1,628

See explanatory information, if any, and SOURCE at end of table.

**Table 37. Graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields .....	65,915	3,789	352	4,230	2,821	47,322	2,529	4,872
Clinical fields .....	2,919	137	21	371	87	1,870	192	241
Dental sciences .....	1,471	34	1	144	120	811	19	342
Nursing .....	20,185	1,211	130	737	636	16,207	814	450
Pharmaceutical sciences .....	3,262	134	2	305	135	1,392	117	1,177
Preventive medicine/community health .....	10,787	1,088	69	1,230	733	6,016	449	1,202
Speech pathology/audiology .....	9,502	409	42	198	368	7,785	355	345
Veterinary sciences .....	1,174	29	7	44	29	779	7	279
Other health fields .....	16,615	747	80	1,201	713	12,462	576	836

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 38. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Total, science and engineering fields .....	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Sciences, total .....	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Physical sciences, total .....	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Astronomy .....	810	840	848	953	871	854	768	787
Chemistry .....	16,337	16,654	16,800	16,701	16,338	16,073	15,583	15,281
Physics .....	12,198	12,452	12,180	11,543	10,850	10,243	9,795	9,539
Physical sciences, n.e.c. ....	108	128	118	164	174	147	122	121
Earth, atmos., & ocean sci., total .....	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Atmospheric sciences .....	857	958	978	981	956	977	964	854
Geosciences .....	5,535	5,708	5,799	5,776	5,608	5,394	5,221	5,045
Oceanography .....	1,931	2,061	2,130	2,263	2,183	2,038	1,924	2,005
Earth, atmos., & ocean sci., n.e.c. ....	1,600	1,758	1,892	1,864	1,981	1,846	1,825	2,048
Mathematical sciences .....	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Computer sciences .....	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Agricultural sciences .....	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Biological sciences, total .....	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Anatomy .....	961	960	977	983	978	1,042	1,033	961
Biochemistry .....	4,940	5,030	5,138	5,201	5,165	4,949	4,776	4,837
Biology .....	8,292	8,444	8,634	8,694	8,562	8,539	8,800	8,554
Biometry/epidemiology .....	1,431	1,634	1,990	2,056	2,093	2,162	2,005	2,559
Biophysics .....	679	728	755	770	800	807	728	707
Botany .....	2,286	2,279	2,351	2,345	2,146	2,128	2,049	1,989
Cell biology .....	2,716	2,961	3,186	3,592	3,692	3,669	3,649	3,728
Ecology .....	908	976	1,040	1,187	1,276	1,239	1,184	1,207
Entomology/parasitology .....	1,014	1,016	1,039	1,066	1,041	1,027	995	1,000
Genetics .....	1,371	1,488	1,640	1,553	1,572	1,605	1,620	1,579
Microbio., immunology, & virology .....	4,401	4,445	4,600	4,698	4,666	4,531	4,408	4,403
Nutrition .....	2,823	2,774	2,910	3,072	3,272	3,296	3,127	2,975
Pathology .....	1,085	1,138	1,264	1,359	1,350	1,339	1,418	1,327
Pharmacology .....	2,304	2,397	2,499	2,672	2,529	2,499	2,446	2,533
Physiology .....	2,163	2,160	2,220	2,221	2,376	2,217	2,102	1,990
Zoology .....	1,760	1,768	1,743	1,712	1,741	1,625	1,513	1,418
Biosciences, n.e.c. ....	2,148	2,634	2,673	3,029	3,176	3,163	3,210	3,287
Psychology .....	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Social sciences, total .....	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Agricultural economics .....	1,976	2,069	1,910	1,892	1,948	1,759	1,697	1,650
Anthropology (cultural & social) .....	4,987	5,231	5,332	5,718	5,662	5,866	5,626	5,549
Economics (except agricultural) .....	9,543	9,816	9,777	9,654	9,402	9,232	8,542	8,317
Geography .....	2,325	2,567	2,760	2,831	2,741	2,757	2,714	2,667
Linguistics .....	2,510	2,401	2,447	2,420	2,382	2,433	2,272	2,144
Political science .....	14,545	16,104	16,860	16,411	16,022	16,074	15,446	14,736
Sociology .....	5,606	6,080	6,167	6,295	6,284	6,165	6,188	5,972
Sociology/anthropology .....	583	612	613	644	617	590	631	608
Social sciences, other .....	5,418	5,973	6,307	6,925	7,538	8,336	8,493	8,185
Engineering, total .....	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Aerospace engineering .....	3,258	3,269	3,227	2,967	2,668	2,545	2,505	2,544
Agricultural engineering .....	823	840	835	879	859	799	748	756
Biomedical engineering .....	1,900	2,138	2,234	2,246	2,277	2,281	2,411	2,475
Chemical engineering .....	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Civil engineering .....	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Electrical engineering .....	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Engineering science .....	1,357	1,408	1,395	1,343	1,241	1,054	1,016	1,111
Industrial/manufacturing eng. ....	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Mechanical engineering .....	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Metallurgical/materials eng. ....	4,038	4,255	4,226	4,084	3,864	3,687	3,646	3,677
Nuclear engineering .....	1,080	1,084	1,070	997	883	771	708	662
Engineering, other .....	3,854	3,157	3,218	2,708	2,744	2,907	2,789	2,727
Total, health fields .....	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Clinical fields .....	1,682	1,873	2,048	2,190	2,171	2,234	2,486	2,474
Dental sciences .....	875	988	1,005	1,048	1,096	1,116	1,235	1,283
Nursing .....	5,674	5,627	5,975	6,770	7,211	7,195	7,518	7,309
Pharmaceutical sciences .....	2,198	2,074	2,130	2,188	2,152	2,225	2,234	2,214
Preventive medicine/community health .....	4,371	4,750	5,240	5,342	5,850	5,688	5,539	6,376
Speech pathology/audiology .....	5,141	5,708	6,295	6,651	6,730	7,153	7,387	7,498
Veterinary sciences .....	706	743	673	679	719	722	972	958
Other health fields .....	6,187	7,055	8,220	9,337	10,526	11,865	12,356	12,907

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all surveyed fields:</b>								
Total, all sources	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Federal, total	61,708	64,280	66,380	67,003	65,896	64,029	63,277	62,817
Dept. of Defense	9,043	9,134	9,641	9,315	9,160	8,625	8,894	8,218
Dept. of HHS, total	20,142	21,125	21,663	22,198	22,299	21,929	21,996	22,385
NIH	15,922	16,980	17,969	18,125	17,978	17,837	17,964	18,181
Other HHS	4,220	4,145	3,694	4,073	4,321	4,092	4,032	4,204
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	2,226	2,501	2,538
NSF	12,598	13,293	13,410	13,764	13,538	13,339	13,313	13,450
USDA	3,042	3,168	3,271	3,364	3,200	2,946	2,596	2,395
All other Federal	16,883	17,560	18,395	18,362	17,699	14,964	13,977	13,831
Institutional support	120,572	122,729	123,994	124,163	124,186	122,943	123,372	122,790
Other non-Federal support, total	26,690	27,390	26,323	26,811	25,464	24,861	24,563	25,815
All other U.S.	20,126	21,010	20,892	21,147	19,982	19,666	19,776	21,617
Foreign	6,564	6,380	5,431	5,664	5,482	5,195	4,787	4,198
Self-support	79,280	87,827	91,498	91,840	90,579	92,887	91,126	90,122
<b>Total, science and engineering:</b>								
Total, all sources	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Federal, total	55,166	57,327	59,469	59,788	58,540	57,094	56,053	55,304
Dept. of Defense	8,640	8,753	9,220	8,951	8,834	8,317	8,586	7,921
Dept. of HHS, total	15,381	16,154	16,701	17,035	17,024	16,817	16,687	16,795
NIH	14,081	14,930	15,749	15,843	15,600	15,411	15,244	15,342
Other HHS	1,300	1,224	952	1,192	1,424	1,406	1,443	1,453
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	2,212	2,480	2,512
NSF	12,542	13,223	13,325	13,656	13,447	13,258	13,213	13,316
USDA	2,982	3,099	3,202	3,297	3,152	2,902	2,562	2,357
All other Federal	15,621	16,098	17,021	16,849	16,083	13,588	12,525	12,403
Institutional support	113,621	115,647	116,483	116,299	115,875	114,560	114,547	113,658
Other non-Federal support, total	25,185	25,717	24,615	24,990	23,535	22,904	22,671	23,764
All other U.S.	19,079	19,793	19,622	19,780	18,572	18,136	18,370	19,977
Foreign	6,106	5,924	4,993	5,210	4,963	4,768	4,301	3,787
Self-support	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799
<b>Sciences, total:</b>								
Total, all sources	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Federal, total	39,372	40,973	42,801	43,266	42,398	41,505	40,362	39,878
Dept. of Defense	3,808	3,843	4,143	4,303	4,101	3,857	3,856	3,633
Dept. of HHS, total	14,574	15,259	15,781	16,133	16,106	15,982	15,771	15,815
NIH	13,360	14,138	14,959	15,065	14,832	14,680	14,477	14,513
Other HHS	1,214	1,121	822	1,068	1,274	1,302	1,294	1,302
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	1,153	1,257	1,326
NSF	8,275	8,652	8,815	9,049	8,906	8,697	8,614	8,605
USDA	2,708	2,753	2,910	2,964	2,812	2,612	2,349	2,174
All other Federal	10,007	10,466	11,152	10,817	10,473	9,204	8,515	8,325
Institutional support	89,482	91,274	92,027	92,200	92,504	91,577	91,240	90,854
Other non-Federal support, total	14,671	15,281	14,969	15,706	14,512	14,100	13,775	14,027
All other U.S.	10,635	11,351	11,595	12,090	11,179	10,858	10,874	11,430
Foreign	4,036	3,930	3,374	3,616	3,333	3,242	2,901	2,597
Self-support	48,811	53,643	55,131	54,928	54,421	55,266	53,399	51,960
<b>Physical sciences,:</b>								
Total, all sources	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Federal, total	10,750	10,929	11,018	10,940	10,270	9,807	9,376	9,079
Dept. of Defense	1,225	1,190	1,184	1,313	1,195	1,069	1,031	991
Dept. of HHS, total	2,017	2,164	2,135	2,179	2,056	2,050	1,942	1,882
NIH	1,849	2,036	2,026	2,050	1,889	1,784	1,638	1,637
Other HHS	168	128	109	129	167	266	304	245
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	523	569	576
NSF	3,561	3,594	3,607	3,689	3,574	3,371	3,374	3,324
USDA	60	66	60	42	38	43	30	19
All other Federal	3,887	3,915	4,032	3,717	3,407	2,751	2,430	2,287
Institutional support	14,683	15,015	14,831	14,448	14,440	13,970	13,796	13,627
Other non-Federal support, total	2,211	2,330	2,227	2,304	2,074	2,072	1,847	1,839
All other U.S.	1,912	2,025	1,949	1,998	1,787	1,793	1,633	1,650
Foreign	299	305	278	306	287	279	214	189
Self-support	1,809	1,800	1,870	1,669	1,449	1,468	1,249	1,183

See explanatory information, if any, and SOURCE at end of table.

**Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Earth, atmospheric, &amp; ocean sciences:</b>								
Total, all sources .....	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Federal, total .....	3,092	3,403	3,623	3,577	3,441	3,253	3,082	2,937
Dept. of Defense .....	449	472	513	493	408	389	364	336
Dept. of HHS, total .....	56	49	48	37	33	49	40	40
NIH .....	23	43	41	36	30	30	27	23
Other HHS .....	33	6	7	1	3	19	13	17
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	326	350	388
NSF .....	1,217	1,312	1,352	1,393	1,375	1,238	1,198	1,115
USDA .....	69	85	64	61	64	74	51	74
All other Federal .....	1,301	1,485	1,646	1,593	1,561	1,177	1,079	984
Institutional support .....	4,105	4,080	4,114	4,126	4,200	4,034	4,127	4,213
Other non-Federal support, total .....	960	989	921	1,014	958	885	872	841
All other U.S. ....	673	746	729	782	724	669	688	677
Foreign .....	287	243	192	232	234	216	184	164
Self-support .....	1,766	2,013	2,141	2,167	2,129	2,083	1,853	1,961
<b>Mathematical sciences:</b>								
Total, all sources .....	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Federal, total .....	1,471	1,460	1,436	1,372	1,264	1,228	1,140	1,036
Dept. of Defense .....	376	385	399	371	321	351	363	283
Dept. of HHS, total .....	69	118	80	76	87	82	96	102
NIH .....	64	111	74	68	63	61	66	70
Other HHS .....	5	7	6	8	24	21	30	32
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	21	19	11
NSF .....	450	455	462	509	465	435	383	386
USDA .....	21	24	27	16	13	9	16	7
All other Federal .....	555	478	468	400	378	330	263	247
Institutional support .....	9,185	9,199	9,035	9,071	8,766	8,506	8,167	8,002
Other non-Federal support, total .....	579	617	505	537	477	545	477	435
All other U.S. ....	310	348	284	319	290	338	300	296
Foreign .....	269	269	221	218	187	207	177	139
Self-support .....	2,392	2,740	2,868	2,519	2,236	2,045	1,745	1,653
<b>Computer sciences:</b>								
Total, all sources .....	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Federal, total .....	2,501	2,595	2,883	3,007	3,109	3,074	3,117	3,259
Dept. of Defense .....	1,125	1,171	1,314	1,311	1,390	1,335	1,414	1,286
Dept. of HHS, total .....	71	100	103	97	110	113	106	123
NIH .....	65	97	95	89	92	80	78	88
Other HHS .....	6	3	8	8	18	33	28	35
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	119	114	118
NSF .....	896	958	1,003	1,040	1,050	1,044	1,076	1,164
USDA .....	8	6	7	9	13	13	12	10
All other Federal .....	401	360	456	550	546	450	395	558
Institutional support .....	5,110	5,262	5,182	5,111	5,172	5,320	5,556	5,755
Other non-Federal support, total .....	1,276	1,306	1,342	1,342	1,249	1,093	1,129	1,169
All other U.S. ....	957	990	1,090	1,066	1,024	852	974	1,004
Foreign .....	319	316	252	276	225	241	155	165
Self-support .....	5,983	6,606	6,420	5,929	5,686	6,146	6,700	7,287
<b>Agricultural sciences:</b>								
Total, all sources .....	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Federal, total .....	1,830	1,942	1,946	1,906	2,011	1,927	1,741	1,623
Dept. of Defense .....	26	18	37	35	32	38	39	51
Dept. of HHS, total .....	45	41	34	48	23	31	29	28
NIH .....	37	38	32	45	17	17	21	13
Other HHS .....	8	3	2	3	6	14	8	15
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	22	20	26
NSF .....	61	76	76	87	88	95	100	92
USDA .....	1,098	1,093	1,140	1,108	1,172	1,040	937	924
All other Federal .....	600	714	659	628	696	701	616	502
Institutional support .....	3,442	3,516	3,541	3,722	3,758	3,582	3,553	3,633
Other non-Federal support, total .....	1,712	1,683	1,666	1,653	1,461	1,432	1,544	1,559
All other U.S. ....	1,056	1,097	1,176	1,137	1,062	1,082	1,208	1,268
Foreign .....	656	586	490	516	399	350	336	291
Self-support .....	1,889	1,968	1,949	1,851	1,926	1,941	1,839	1,714

See explanatory information, if any, and SOURCE at end of table.

**Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Biological sciences:</b>								
Total, all sources	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Federal, total	14,372	15,002	16,048	16,583	16,492	16,435	16,175	16,031
Dept. of Defense	220	229	269	346	354	358	359	344
Dept. of HHS, total	10,616	10,989	11,554	11,927	12,004	11,819	11,781	11,815
NIH	10,164	10,575	11,236	11,412	11,332	11,230	11,197	11,200
Other HHS	452	414	318	515	672	589	584	615
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	85	108	102
NSF	1,269	1,333	1,362	1,369	1,399	1,484	1,518	1,526
USDA	1,060	1,078	1,215	1,280	1,078	1,065	923	802
All other Federal	1,207	1,373	1,648	1,661	1,657	1,624	1,486	1,442
Institutional support	18,584	19,046	19,265	19,895	19,987	19,553	19,441	19,396
Other non-Federal support, total	3,703	3,758	3,836	4,116	3,873	3,713	3,524	3,702
All other U.S.	2,989	3,082	3,255	3,483	3,267	3,156	3,006	3,174
Foreign	714	676	581	633	606	557	518	528
Self-support	4,623	5,026	5,510	5,616	6,083	6,136	5,923	5,925
<b>Psychology:</b>								
Total, all sources	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Federal, total	2,379	2,457	2,565	2,528	2,467	2,662	2,648	2,888
Dept. of Defense	146	135	163	172	174	136	110	128
Dept. of HHS, total	1,332	1,378	1,412	1,347	1,320	1,512	1,447	1,476
NIH	891	942	1,153	1,080	1,089	1,213	1,188	1,221
Other HHS	441	436	259	267	231	299	259	255
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	7	12	14
NSF	267	281	308	287	286	287	278	279
USDA	24	19	15	27	16	5	7	8
All other Federal	610	644	667	695	671	715	794	983
Institutional support	11,184	11,399	12,066	11,863	11,780	11,891	12,217	11,875
Other non-Federal support, total	1,026	1,083	1,031	1,142	1,072	955	1,185	1,314
All other U.S.	972	1,026	984	1,069	1,029	916	1,128	1,262
Foreign	54	57	47	73	43	39	57	52
Self-support	12,226	13,094	12,916	13,302	13,409	13,480	13,144	12,955
<b>Social sciences:</b>								
Total, all sources	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Federal, total	2,977	3,185	3,282	3,353	3,344	3,119	3,083	3,025
Dept. of Defense	241	243	264	262	227	181	176	214
Dept. of HHS, total	368	420	415	422	473	326	330	349
NIH	267	296	302	285	320	265	262	261
Other HHS	101	124	113	137	153	61	68	88
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	50	65	91
NSF	554	643	645	675	669	743	687	719
USDA	368	382	382	421	418	363	373	330
All other Federal	1,446	1,497	1,576	1,573	1,557	1,456	1,452	1,322
Institutional support	23,189	23,757	23,993	23,964	24,401	24,721	24,383	24,353
Other non-Federal support, total	3,204	3,515	3,441	3,598	3,348	3,405	3,197	3,168
All other U.S.	1,766	2,037	2,128	2,236	1,996	2,052	1,937	2,099
Foreign	1,438	1,478	1,313	1,362	1,352	1,353	1,260	1,069
Self-support	18,123	20,396	21,457	21,875	21,503	21,967	20,946	19,282
<b>Engineering, total:</b>								
Total, all sources	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Federal, total	15,794	16,354	16,668	16,522	16,142	15,589	15,691	15,426
Dept. of Defense	4,832	4,910	5,077	4,648	4,733	4,460	4,730	4,288
Dept. of HHS, total	807	895	920	902	918	835	916	980
NIH	721	792	790	778	768	731	767	829
Other HHS	86	103	130	124	150	104	149	151
NASA <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	1,059	1,223	1,186
NSF	4,267	4,571	4,510	4,607	4,541	4,561	4,599	4,711
USDA	274	346	292	333	340	290	213	183
All other Federal	5,614	5,632	5,869	6,032	5,610	4,384	4,010	4,078
Institutional support	24,139	24,373	24,456	24,099	23,371	22,983	23,307	22,804
Other non-Federal support, total	10,514	10,436	9,646	9,284	9,023	8,804	8,896	9,737
All other U.S.	8,444	8,442	8,027	7,690	7,393	7,278	7,496	8,547
Foreign	2,070	1,994	1,619	1,594	1,630	1,526	1,400	1,190
Self-support	18,633	21,074	20,911	19,607	17,299	16,698	15,941	15,839

See explanatory information, if any, and SOURCE at end of table.

**Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Chemical engineering:</b>								
Total, all sources .....	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Federal, total .....	1,592	1,643	1,735	1,706	1,740	1,769	1,627	1,682
Dept. of Defense .....	134	123	138	128	164	166	160	153
Dept. of HHS, total .....	132	166	141	173	163	162	137	149
NIH .....	128	146	119	143	136	148	121	119
Other HHS .....	4	20	22	30	27	14	16	30
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	89	77	97
NSF .....	663	696	726	747	759	776	706	759
USDA .....	16	38	52	54	66	34	25	25
All other Federal .....	647	620	678	604	588	542	522	499
Institutional support .....	2,262	2,286	2,328	2,394	2,257	2,141	2,198	2,086
Other non-Federal support, total .....	1,222	1,164	1,057	1,143	1,071	1,105	1,127	937
All other U.S. ....	1,106	1,068	958	1,039	936	949	947	825
Foreign .....	116	96	99	104	135	156	180	112
Self-support .....	677	807	882	811	837	841	761	842
<b>Civil engineering:</b>								
Total, all sources .....	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Federal, total .....	1,732	1,996	1,943	2,019	1,917	1,843	1,781	1,669
Dept. of Defense .....	273	349	322	315	271	196	223	184
Dept. of HHS, total .....	32	41	38	45	41	39	47	58
NIH .....	28	36	30	37	31	33	41	47
Other HHS .....	4	5	8	8	10	6	6	11
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	117	121	60
NSF .....	496	531	513	553	528	534	529	544
USDA .....	51	68	51	53	53	70	40	28
All other Federal .....	880	1,007	1,019	1,053	1,024	887	821	795
Institutional support .....	4,131	4,329	4,497	4,671	4,780	4,674	4,631	4,494
Other non-Federal support, total .....	1,323	1,436	1,244	1,219	1,148	1,144	1,061	1,083
All other U.S. ....	912	1,019	971	938	869	901	841	904
Foreign .....	411	417	273	281	279	243	220	179
Self-support .....	3,806	4,255	4,298	4,266	3,936	3,720	3,427	3,423
<b>Electrical engineering:</b>								
Total, all sources .....	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Federal, total .....	3,791	3,986	4,033	3,974	4,004	3,927	4,371	4,317
Dept. of Defense .....	1,623	1,680	1,734	1,649	1,699	1,647	1,962	1,832
Dept. of HHS, total .....	85	90	103	100	113	93	118	132
NIH .....	76	81	86	83	84	71	71	104
Other HHS .....	9	9	17	17	29	22	47	28
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	162	214	224
NSF .....	1,253	1,360	1,260	1,266	1,298	1,298	1,346	1,304
USDA .....	18	24	9	24	33	12	14	12
All other Federal .....	812	832	927	935	861	715	717	813
Institutional support .....	6,462	6,663	6,544	6,237	6,086	6,271	6,568	6,361
Other non-Federal support, total .....	2,980	2,926	2,746	2,578	2,564	2,630	2,720	3,145
All other U.S. ....	2,450	2,423	2,311	2,178	2,146	2,251	2,384	2,847
Foreign .....	530	503	435	400	418	379	336	298
Self-support .....	5,980	6,673	6,359	5,943	4,922	4,568	4,652	5,228
<b>Industrial engineering:</b>								
Total, all sources .....	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Federal, total .....	680	634	625	607	626	625	588	581
Dept. of Defense .....	279	264	244	168	167	208	193	170
Dept. of HHS, total .....	52	53	78	50	54	49	36	44
NIH .....	16	22	36	28	27	27	30	38
Other HHS .....	36	31	42	22	27	22	6	6
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	24	21	24
NSF .....	187	165	171	203	172	169	143	176
USDA .....	5	5	3	1	0	1	1	4
All other Federal .....	157	147	129	185	233	174	194	163
Institutional support .....	1,826	1,826	1,915	1,851	1,802	1,753	1,672	1,694
Other non-Federal support, total .....	490	564	487	548	491	454	503	552
All other U.S. ....	361	427	398	455	413	348	406	454
Foreign .....	129	137	89	93	78	106	97	98
Self-support .....	2,401	2,819	2,655	2,679	2,185	2,128	2,151	1,941

See explanatory information, if any, and SOURCE at end of table.

**Table 39. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary source of support: 1991-1998**

Field and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Mechanical engineering:</b>								
Total, all sources .....	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Federal, total .....	2,697	2,753	2,952	2,885	2,726	2,546	2,573	2,555
Dept. of Defense .....	724	715	777	763	801	709	734	695
Dept. of HHS, total .....	71	87	86	79	93	76	109	112
NIH .....	58	77	70	70	82	63	70	79
Other HHS .....	13	10	16	9	11	13	39	33
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	201	282	276
NSF .....	732	786	805	779	734	764	837	901
USDA .....	29	26	9	10	4	13	12	5
All other Federal .....	1,141	1,139	1,275	1,254	1,094	783	599	566
Institutional support .....	4,219	4,317	4,150	4,024	3,832	3,869	3,825	3,743
Other non-Federal support, total .....	1,666	1,599	1,550	1,552	1,588	1,441	1,441	1,592
All other U.S. ....	1,395	1,382	1,381	1,313	1,335	1,237	1,273	1,449
Foreign .....	271	217	169	239	253	204	168	143
Self-support .....	2,833	3,410	3,476	3,181	2,787	2,581	2,335	1,929
<b>Other engineering:</b>								
Total, all sources .....	16,310	16,151	16,205	15,224	14,536	14,044	13,823	13,952
Federal, total .....	5,302	5,342	5,380	5,331	5,129	4,879	4,751	4,622
Dept. of Defense .....	1,799	1,779	1,862	1,625	1,631	1,534	1,458	1,254
Dept. of HHS, total .....	435	458	474	455	454	416	469	485
NIH .....	415	430	449	417	408	389	434	442
Other HHS .....	20	28	25	38	46	27	35	43
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	466	508	505
NSF .....	936	1,033	1,035	1,059	1,050	1,020	1,038	1,027
USDA .....	155	185	168	191	184	160	121	109
All other Federal .....	1,977	1,887	1,841	2,001	1,810	1,283	1,157	1,242
Institutional support .....	5,239	4,952	5,022	4,922	4,614	4,275	4,413	4,426
Other non-Federal support, total .....	2,833	2,747	2,562	2,244	2,161	2,030	2,044	2,428
All other U.S. ....	2,220	2,123	2,008	1,767	1,694	1,592	1,645	2,068
Foreign .....	613	624	554	477	467	438	399	360
Self-support .....	2,936	3,110	3,241	2,727	2,632	2,860	2,615	2,476
<b>Total, health fields:</b>								
Total, all sources .....	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Federal, total .....	6,542	6,953	6,911	7,215	7,356	6,935	7,224	7,513
Dept. of Defense .....	403	381	421	364	326	308	308	297
Dept. of HHS, total .....	4,761	4,971	4,962	5,163	5,275	5,112	5,309	5,590
NIH .....	1,841	2,050	2,220	2,282	2,378	2,426	2,720	2,839
Other HHS .....	2,920	2,921	2,742	2,881	2,897	2,686	2,589	2,751
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	14	21	26
NSF .....	56	70	85	108	91	81	100	134
USDA .....	60	69	69	67	48	44	34	38
All other Federal .....	1,262	1,462	1,374	1,513	1,616	1,376	1,452	1,428
Institutional support .....	6,951	7,082	7,511	7,864	8,311	8,383	8,825	9,132
Other non-Federal support, total .....	1,505	1,673	1,708	1,821	1,929	1,957	1,892	2,051
All other U.S. ....	1,047	1,217	1,270	1,367	1,410	1,530	1,406	1,640
Foreign .....	458	456	438	454	519	427	486	411
Self-support .....	11,836	13,110	15,456	17,305	18,859	20,923	21,786	22,323

<sup>1</sup> Data for NASA were not collected separately prior to 1996.

**KEY:** N/A = Not applicable

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 40. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary mechanism of support: 1991-1998**

Field and mechanism of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all surveyed fields:</b>								
Total, all types .....	288,250	302,226	308,195	309,817	306,125	304,720	302,338	301,544
Fellowships .....	26,245	28,126	28,623	28,412	28,371	28,296	28,350	28,526
Traineeships .....	14,842	14,836	14,879	14,986	15,289	14,813	13,723	14,306
Research assistantships .....	83,366	86,206	88,135	89,681	87,662	85,460	85,619	85,827
Teaching assistantships .....	62,948	63,534	65,207	64,724	63,907	63,730	63,342	62,884
Other types of support .....	100,849	109,524	111,351	112,014	110,896	112,421	111,304	110,001
<b>Total, science and engineering:</b>								
Total, all types .....	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Fellowships .....	24,575	26,293	26,679	26,337	26,234	25,899	25,964	26,098
Traineeships .....	10,287	9,852	10,082	10,137	10,429	10,197	9,464	9,657
Research assistantships .....	79,581	82,428	84,384	85,555	83,422	81,360	81,014	81,051
Teaching assistantships .....	60,583	61,154	62,842	62,068	61,186	60,836	60,353	59,882
Other types of support .....	86,390	93,681	92,622	91,515	88,399	88,230	85,816	83,837
<b>Sciences, total:</b>								
Total, all types .....	192,336	201,171	204,928	206,100	203,835	202,448	198,776	196,719
Fellowships .....	18,887	20,259	20,592	20,420	20,336	20,302	20,273	20,605
Traineeships .....	9,197	8,865	9,054	9,224	9,430	9,335	8,600	8,812
Research assistantships .....	53,054	55,133	56,694	57,822	56,644	55,134	54,375	53,926
Teaching assistantships .....	49,631	50,563	51,936	51,567	51,236	51,021	50,396	49,997
Other types of support .....	61,567	66,351	66,652	67,067	66,189	66,656	65,132	63,379
<b>Physical sciences,:</b>								
Total, all types .....	29,453	30,074	29,946	29,361	28,233	27,317	26,268	25,728
Fellowships .....	2,625	2,804	2,678	2,390	2,304	2,156	2,091	2,080
Traineeships .....	784	694	742	664	672	630	517	479
Research assistantships .....	12,094	12,328	12,160	12,224	11,714	11,400	11,167	10,937
Teaching assistantships .....	11,445	11,642	11,931	11,663	11,436	10,999	10,688	10,540
Other types of support .....	2,505	2,606	2,435	2,420	2,107	2,132	1,805	1,692
<b>Earth, atmospheric, &amp; ocean sciences:</b>								
Total, all types .....	9,923	10,485	10,799	10,884	10,728	10,255	9,934	9,952
Fellowships .....	885	888	898	864	883	866	810	920
Traineeships .....	93	120	153	138	131	131	89	113
Research assistantships .....	4,266	4,488	4,615	4,712	4,526	4,201	4,145	3,985
Teaching assistantships .....	2,257	2,337	2,405	2,391	2,413	2,394	2,511	2,445
Other types of support .....	2,422	2,652	2,728	2,779	2,775	2,663	2,379	2,489
<b>Mathematical sciences:</b>								
Total, all types .....	13,627	14,016	13,844	13,499	12,743	12,324	11,529	11,126
Fellowships .....	1,350	1,394	1,350	1,203	1,291	1,274	1,194	1,096
Traineeships .....	207	220	258	244	216	177	176	153
Research assistantships .....	1,293	1,330	1,349	1,460	1,367	1,231	1,311	1,132
Teaching assistantships .....	7,507	7,463	7,308	7,318	7,004	6,881	6,482	6,373
Other types of support .....	3,270	3,609	3,579	3,274	2,865	2,761	2,366	2,372
<b>Computer sciences:</b>								
Total, all types .....	14,870	15,769	15,827	15,389	15,216	15,633	16,502	17,470
Fellowships .....	868	838	799	888	893	888	892	953
Traineeships .....	130	142	210	239	213	187	196	210
Research assistantships .....	3,430	3,556	3,645	3,737	3,778	3,841	3,907	4,157
Teaching assistantships .....	3,364	3,409	3,463	3,273	3,274	3,277	3,534	3,650
Other types of support .....	7,078	7,824	7,710	7,252	7,058	7,440	7,973	8,500
<b>Agricultural sciences:</b>								
Total, all types .....	8,873	9,109	9,102	9,132	9,156	8,882	8,677	8,529
Fellowships .....	456	472	522	513	449	424	427	431
Traineeships .....	105	110	153	116	124	121	113	98
Research assistantships .....	4,939	5,126	5,191	5,342	5,297	5,105	5,021	4,899
Teaching assistantships .....	749	774	867	872	924	928	924	990
Other types of support .....	2,624	2,627	2,369	2,289	2,362	2,304	2,192	2,111
<b>Biological sciences:</b>								
Total, all types .....	41,282	42,832	44,659	46,210	46,435	45,837	45,063	45,054
Fellowships .....	4,608	4,983	5,165	5,459	5,299	5,194	5,412	5,603
Traineeships .....	5,078	4,806	4,878	5,202	5,283	5,336	5,017	5,201
Research assistantships .....	16,641	17,398	18,584	19,144	18,963	18,376	18,227	17,924
Teaching assistantships .....	8,339	8,492	8,696	8,884	8,813	8,864	8,665	8,574
Other types of support .....	6,616	7,153	7,336	7,521	8,077	8,067	7,742	7,752
<b>Psychology:</b>								
Total, all types .....	26,815	28,033	28,578	28,835	28,728	28,988	29,194	29,032
Fellowships .....	1,644	1,807	1,883	1,807	1,790	1,905	2,062	2,265
Traineeships .....	1,125	1,112	1,064	992	1,060	1,114	994	1,020
Research assistantships .....	3,877	3,906	4,148	4,193	4,169	4,255	4,232	4,300
Teaching assistantships .....	5,327	5,435	5,911	5,696	5,766	5,827	5,821	5,624
Other types of support .....	14,842	15,773	15,572	16,147	15,943	15,887	16,085	15,823

See explanatory information, if any, and SOURCE at end of table.

**Table 40. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by field and primary mechanism of support: 1991-1998**

Field and mechanism of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Social sciences:</b>								
Total, all types .....	47,493	50,853	52,173	52,790	52,596	53,212	51,609	49,828
Fellowships .....	6,451	7,073	7,297	7,296	7,427	7,595	7,385	7,257
Traineeships .....	1,675	1,661	1,596	1,629	1,731	1,639	1,498	1,538
Research assistantships .....	6,514	7,001	7,002	7,010	6,830	6,725	6,365	6,592
Teaching assistantships .....	10,643	11,011	11,355	11,470	11,606	11,851	11,771	11,801
Other types of support .....	22,210	24,107	24,923	25,385	25,002	25,402	24,590	22,640
<b>Engineering, total:</b>								
Total, all types .....	69,080	72,237	71,681	69,512	65,835	64,074	63,835	63,806
Fellowships .....	5,688	6,034	6,087	5,917	5,898	5,597	5,691	5,493
Traineeships .....	1,090	987	1,028	913	999	862	864	845
Research assistantships .....	26,527	27,295	27,690	27,733	26,778	26,226	26,639	27,125
Teaching assistantships .....	10,952	10,591	10,906	10,501	9,950	9,815	9,957	9,885
Other types of support .....	24,823	27,330	25,970	24,448	22,210	21,574	20,684	20,458
<b>Chemical engineering:</b>								
Total, all types .....	5,753	5,900	6,002	6,054	5,905	5,856	5,713	5,547
Fellowships .....	684	733	718	701	776	752	817	699
Traineeships .....	173	153	123	98	105	93	94	97
Research assistantships .....	2,978	3,003	3,104	3,258	3,091	3,031	2,946	2,880
Teaching assistantships .....	993	1,002	1,014	935	906	916	913	883
Other types of support .....	925	1,009	1,043	1,062	1,027	1,064	943	988
<b>Civil engineering:</b>								
Total, all types .....	10,992	12,016	11,982	12,175	11,781	11,381	10,900	10,669
Fellowships .....	674	795	883	860	884	862	833	790
Traineeships .....	209	213	205	187	187	174	176	158
Research assistantships .....	3,538	3,914	4,008	4,187	4,180	4,086	3,935	3,820
Teaching assistantships .....	1,617	1,599	1,781	1,859	1,806	1,758	1,747	1,739
Other types of support .....	4,954	5,495	5,105	5,082	4,724	4,501	4,209	4,162
<b>Electrical engineering:</b>								
Total, all types .....	19,213	20,248	19,682	18,732	17,576	17,396	18,311	19,051
Fellowships .....	1,392	1,466	1,425	1,456	1,413	1,376	1,373	1,309
Traineeships .....	182	159	169	145	155	152	122	133
Research assistantships .....	6,446	6,764	6,860	6,729	6,627	6,841	7,463	7,638
Teaching assistantships .....	3,363	3,323	3,306	3,128	3,031	3,113	3,274	3,264
Other types of support .....	7,830	8,536	7,922	7,274	6,350	5,914	6,079	6,707
<b>Industrial engineering:</b>								
Total, all types .....	5,397	5,843	5,682	5,685	5,104	4,960	4,914	4,768
Fellowships .....	258	264	278	270	298	232	236	251
Traineeships .....	31	27	47	32	37	14	21	24
Research assistantships .....	1,222	1,202	1,236	1,293	1,285	1,251	1,236	1,369
Teaching assistantships .....	874	865	923	917	813	770	766	769
Other types of support .....	3,012	3,485	3,198	3,173	2,671	2,693	2,655	2,355
<b>Mechanical engineering:</b>								
Total, all types .....	11,415	12,079	12,128	11,642	10,933	10,437	10,174	9,819
Fellowships .....	859	897	901	920	923	892	830	891
Traineeships .....	173	162	210	187	187	165	215	180
Research assistantships .....	4,604	4,701	4,726	4,623	4,352	4,201	4,270	4,414
Teaching assistantships .....	2,150	2,132	2,217	2,019	1,882	1,805	1,832	1,727
Other types of support .....	3,629	4,187	4,074	3,893	3,589	3,374	3,027	2,607
<b>Other engineering:</b>								
Total, all types .....	16,310	16,151	16,205	15,224	14,536	14,044	13,823	13,952
Fellowships .....	1,821	1,879	1,882	1,710	1,604	1,483	1,602	1,553
Traineeships .....	322	273	274	264	328	264	236	253
Research assistantships .....	7,739	7,711	7,756	7,643	7,243	6,816	6,789	7,004
Teaching assistantships .....	1,955	1,670	1,665	1,643	1,512	1,453	1,425	1,503
Other types of support .....	4,473	4,618	4,628	3,964	3,849	4,028	3,771	3,639
<b>Total, health fields:</b>								
Total, all types .....	26,834	28,818	31,586	34,205	36,455	38,198	39,727	41,019
Fellowships .....	1,670	1,833	1,944	2,075	2,137	2,397	2,386	2,428
Traineeships .....	4,555	4,984	4,797	4,849	4,860	4,616	4,259	4,649
Research assistantships .....	3,785	3,778	3,751	4,126	4,240	4,100	4,605	4,776
Teaching assistantships .....	2,365	2,380	2,365	2,656	2,721	2,894	2,989	3,002
Other types of support .....	14,459	15,843	18,729	20,499	22,497	24,191	25,488	26,164

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 41. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by detailed field and primary mechanism of support: 1998**

Field	Total	Fellowships	Trainee-ships	Research assistant-ships	Teaching assistant-ships	Other types of support
Total, all surveyed fields .....	301,544	28,526	14,306	85,827	62,884	110,001
Total, science and engineering fields .....	260,525	26,098	9,657	81,051	59,882	83,837
Sciences, total .....	196,719	20,605	8,812	53,926	49,997	63,379
Physical sciences, total .....	25,728	2,080	479	10,937	10,540	1,692
Astronomy .....	787	134	20	373	225	35
Chemistry .....	15,281	1,126	321	6,313	6,686	835
Physics .....	9,539	815	138	4,209	3,619	758
Physical sciences, n.e.c. ....	121	5	0	42	10	64
Earth, atmos., & ocean sci., total .....	9,952	920	113	3,985	2,445	2,489
Atmospheric sciences .....	854	48	1	575	110	120
Geosciences .....	5,045	509	72	1,706	1,762	996
Oceanography .....	2,005	233	13	1,137	201	421
Earth, atmos., & ocean sci., n.e.c. ....	2,048	130	27	567	372	952
Mathematical sciences .....	11,126	1,096	153	1,132	6,373	2,372
Computer sciences .....	17,470	953	210	4,157	3,650	8,500
Agricultural sciences .....	8,529	431	98	4,899	990	2,111
Biological sciences, total .....	45,054	5,603	5,201	17,924	8,574	7,752
Anatomy .....	961	175	110	330	121	225
Biochemistry .....	4,837	681	626	2,545	578	407
Biology .....	8,554	916	445	2,137	3,522	1,534
Biometry/epidemiology .....	2,559	283	327	586	133	1,230
Biophysics .....	707	156	133	308	41	69
Botany .....	1,989	163	41	982	584	219
Cell biology .....	3,728	604	809	1,729	397	189
Ecology .....	1,207	197	34	396	441	139
Entomology/parasitology .....	1,000	56	16	664	147	117
Genetics .....	1,579	222	332	723	93	209
Microbio., immunology, & virology .....	4,403	667	660	2,004	564	508
Nutrition .....	2,975	147	106	1,256	425	1,041
Pathology .....	1,327	217	177	514	56	363
Pharmacology .....	2,533	377	615	1,112	206	223
Physiology .....	1,990	212	255	730	178	615
Zoology .....	1,418	134	37	387	735	125
Biosciences, n.e.c. ....	3,287	396	478	1,521	353	539
Psychology .....	29,032	2,265	1,020	4,300	5,624	15,823
Social sciences, total .....	49,828	7,257	1,538	6,592	11,801	22,640
Agricultural economics .....	1,650	108	15	892	188	447
Anthropology (cultural & social) .....	5,549	1,177	77	514	1,351	2,430
Economics (except agricultural) .....	8,317	1,386	221	1,013	2,634	3,063
Geography .....	2,667	165	36	583	959	924
Linguistics .....	2,144	353	67	197	671	856
Political science .....	14,736	2,353	758	1,309	2,751	7,565
Sociology .....	5,972	855	214	903	2,066	1,934
Sociology/anthropology .....	608	24	0	125	174	285
Social sciences, other .....	8,185	836	150	1,056	1,007	5,136
Engineering, total .....	63,806	5,493	845	27,125	9,885	20,458
Aerospace engineering .....	2,544	249	16	1,229	311	739
Agricultural engineering .....	756	71	5	414	80	186
Biomedical engineering .....	2,475	452	144	1,013	265	601
Chemical engineering .....	5,547	699	97	2,880	883	988
Civil engineering .....	10,669	790	158	3,820	1,739	4,162
Electrical engineering .....	19,051	1,309	133	7,638	3,264	6,707
Engineering science .....	1,111	150	8	522	146	285
Industrial/manufacturing eng. ....	4,768	251	24	1,369	769	2,355
Mechanical engineering .....	9,819	891	180	4,414	1,727	2,607
Metallurgical/materials eng. ....	3,677	262	47	2,460	366	542
Nuclear engineering .....	662	84	29	396	65	88
Engineering, other .....	2,727	285	4	970	270	1,198
Total, health fields .....	41,019	2,428	4,649	4,776	3,002	26,164
Clinical fields .....	2,474	217	536	414	88	1,219
Dental sciences .....	1,283	100	81	92	261	749
Nursing .....	7,309	354	1,977	421	359	4,198
Pharmaceutical sciences .....	2,214	243	61	777	708	425
Preventive medicine/community health .....	6,376	367	604	728	170	4,507
Speech pathology/audiology .....	7,498	265	490	697	712	5,334
Veterinary sciences .....	958	32	29	403	42	452
Other health fields .....	12,907	850	871	1,244	662	9,280

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 42. Full-time graduate students in science and engineering fields in doctorate-granting institutions, by primary mechanism and primary source of support: 1991-1998**

Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total, all types:</b>								
Total, all sources .....	261,416	273,408	276,609	275,612	269,670	266,522	262,611	260,525
Federal, total .....	55,166	57,327	59,469	59,788	58,540	57,094	56,053	55,304
Dept. of Defense .....	8,640	8,753	9,220	8,951	8,834	8,317	8,586	7,921
Dept. of HHS, total .....	15,381	16,154	16,701	17,035	17,024	16,817	16,687	16,795
NIH .....	14,081	14,930	15,749	15,843	15,600	15,411	15,244	15,342
Other HHS .....	1,300	1,224	952	1,192	1,424	1,406	1,443	1,453
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2,212	2,480	2,512
NSF .....	12,542	13,223	13,325	13,656	13,447	13,258	13,213	13,316
USDA .....	2,982	3,099	3,202	3,297	3,152	2,902	2,562	2,357
All other Federal .....	15,621	16,098	17,021	16,849	16,083	13,588	12,525	12,403
Institutional support .....	113,621	115,647	116,483	116,299	115,875	114,560	114,547	113,658
Other non-Federal support, total .....	25,185	25,717	24,615	24,990	23,535	22,904	22,671	23,764
All other U.S. ....	19,079	19,793	19,622	19,780	18,572	18,136	18,370	19,977
Foreign .....	6,106	5,924	4,993	5,210	4,963	4,768	4,301	3,787
Self-support .....	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799
<b>Fellowships:</b>								
Total, all sources .....	24,575	26,293	26,679	26,337	26,234	25,899	25,964	26,098
Federal, total .....	6,782	7,102	6,870	6,250	6,226	6,304	6,143	6,242
Dept. of Defense .....	673	645	622	523	469	506	507	519
Dept. of HHS, total .....	807	979	1,017	1,040	1,155	1,133	1,217	1,277
NIH .....	711	863	903	909	954	954	991	1,049
Other HHS .....	96	116	114	131	201	179	226	228
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	398	349	362
NSF .....	2,218	2,339	2,256	2,263	2,305	2,439	2,299	2,327
USDA .....	102	110	110	106	116	101	123	116
All other Federal .....	2,982	3,029	2,865	2,318	2,181	1,727	1,648	1,641
Institutional support .....	12,081	13,129	13,711	13,663	14,020	14,097	14,898	14,896
Other non-Federal support, total .....	5,712	6,062	6,098	6,424	5,988	5,498	4,923	4,960
All other U.S. ....	3,511	3,764	3,652	4,019	3,764	3,362	3,082	3,260
Foreign .....	2,201	2,298	2,446	2,405	2,224	2,136	1,841	1,700
Self-support .....	N/A							
<b>Traineeships:</b>								
Total, all sources .....	10,287	9,852	10,082	10,137	10,429	10,197	9,464	9,657
Federal, total .....	5,400	5,472	5,678	5,774	5,596	5,484	5,108	5,385
Dept. of Defense .....	112	86	91	109	104	124	108	64
Dept. of HHS, total .....	4,372	4,362	4,344	4,465	4,335	4,250	3,957	4,214
NIH .....	4,072	4,081	4,160	4,178	3,978	3,984	3,773	4,036
Other HHS .....	300	281	184	287	357	266	184	178
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	65	76	58
NSF .....	80	104	161	256	333	428	379	407
USDA .....	33	28	42	36	17	24	23	14
All other Federal .....	803	892	1,040	908	807	593	565	628
Institutional support .....	4,191	3,608	3,540	3,497	4,154	4,157	3,753	3,579
Other non-Federal support, total .....	696	772	864	866	679	556	603	693
All other U.S. ....	511	565	575	646	484	374	454	560
Foreign .....	185	207	289	220	195	182	149	133
Self-support .....	N/A							
<b>Research assistantships:</b>								
Total, all sources .....	79,581	82,428	84,384	85,555	83,422	81,360	81,014	81,051
Federal, total .....	38,970	40,686	42,628	43,378	42,528	41,406	41,070	39,564
Dept. of Defense .....	5,414	5,667	6,158	6,121	6,177	5,887	6,261	5,731
Dept. of HHS, total .....	9,892	10,404	10,920	11,177	11,129	10,985	11,035	10,554
NIH .....	9,033	9,633	10,330	10,462	10,333	10,110	10,087	9,573
Other HHS .....	859	771	590	715	796	875	948	981
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	1,706	2,002	2,035
NSF .....	10,103	10,573	10,676	10,952	10,518	10,169	10,362	10,316
USDA .....	2,730	2,857	2,930	3,035	2,920	2,677	2,344	2,136
All other Federal .....	10,831	11,185	11,944	12,093	11,784	9,982	9,066	8,792
Institutional support .....	28,245	28,807	28,553	29,190	28,710	27,776	27,433	28,295
Other non-Federal support, total .....	12,366	12,935	13,203	12,987	12,184	12,178	12,511	13,192
All other U.S. ....	11,563	12,125	12,347	12,224	11,448	11,453	11,771	12,566
Foreign .....	803	810	856	763	736	725	740	626
Self-support .....	N/A							

See explanatory information, if any, and SOURCE at end of table.

**Table 42. Full-time graduate students in science and engineering fields in doctorate-granting institutions, by primary mechanism and primary source of support: 1991-1998**

Mechanism and source of support	1991	1992	1993	1994	1995	1996	1997	1998
<b>Teaching assistantships:</b>								
Total, all sources .....	60,583	61,154	62,842	62,068	61,186	60,836	60,353	59,882
Federal, total .....	390	547	741	627	624	720	726	906
Dept. of Defense .....	N/A							
Dept. of HHS, total .....	85	164	159	130	111	180	156	228
NIH .....	72	147	154	121	104	176	126	221
Other HHS .....	13	17	5	9	7	4	30	7
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	2	21	23
NSF .....	64	111	136	98	151	117	80	130
USDA .....	33	22	39	43	37	41	30	36
All other Federal .....	208	250	407	356	325	380	439	489
Institutional support .....	59,704	60,079	61,535	60,869	60,043	59,510	59,084	58,414
Other non-Federal support, total .....	489	528	566	572	519	606	543	562
All other U.S. ....	489	528	566	572	519	606	543	562
Foreign .....	N/A							
Self-support .....	N/A							
<b>Other types of support:</b>								
Total, all sources .....	86,390	93,681	92,622	91,515	88,399	88,230	85,816	83,837
Federal, total .....	3,624	3,520	3,552	3,759	3,566	3,180	3,006	3,207
Dept. of Defense .....	2,441	2,355	2,349	2,198	2,084	1,800	1,710	1,607
Dept. of HHS, total .....	225	245	261	223	294	269	322	522
NIH .....	193	206	202	173	231	187	267	463
Other HHS .....	32	39	59	50	63	82	55	59
NASA <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	41	32	34
NSF .....	77	96	96	87	140	105	93	136
USDA .....	84	82	81	77	62	59	42	55
All other Federal .....	797	742	765	1,174	986	906	807	853
Institutional support .....	9,400	10,024	9,144	9,080	8,948	9,020	9,379	8,474
Other non-Federal support, total .....	5,922	5,420	3,884	4,141	4,165	4,066	4,091	4,357
All other U.S. ....	3,005	2,811	2,482	2,319	2,357	2,341	2,520	3,029
Foreign .....	2,917	2,609	1,402	1,822	1,808	1,725	1,571	1,328
Self-support .....	67,444	74,717	76,042	74,535	71,720	71,964	69,340	67,799

<sup>1</sup> Data for NASA were not collected separately prior to 1996.

**KEY:** N/A = Not applicable

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 43. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by sex, primary source of support, and field: 1998**

Sex and source of support	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, & ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
<b>Total</b>										
Total, all sources .....	301,544	196,719	25,728	9,952	11,126	17,470	8,529	45,054	29,032	49,828
Federal, total .....	62,817	39,878	9,079	2,937	1,036	3,259	1,623	16,031	2,888	3,025
Dept. of Defense .....	8,218	3,633	991	336	283	1,286	51	344	128	214
Dept. of HHS, total .....	22,385	15,815	1,882	40	102	123	28	11,815	1,476	349
NIH .....	18,181	14,513	1,637	23	70	88	13	11,200	1,221	261
Other HHS .....	4,204	1,302	245	17	32	35	15	615	255	88
NASA .....	2,538	1,326	576	388	11	118	26	102	14	91
NSF .....	13,450	8,605	3,324	1,115	386	1,164	92	1,526	279	719
USDA .....	2,395	2,174	19	74	7	10	924	802	8	330
All other Federal .....	13,831	8,325	2,287	984	247	558	502	1,442	983	1,322
Institutional support .....	122,790	90,854	13,627	4,213	8,002	5,755	3,633	19,396	11,875	24,353
Other non-Federal, total .....	25,815	14,027	1,839	841	435	1,169	1,559	3,702	1,314	3,168
All other U.S. ....	21,617	11,430	1,650	677	296	1,004	1,268	3,174	1,262	2,099
Foreign .....	4,198	2,597	189	164	139	165	291	528	52	1,069
Self-support .....	90,122	51,960	1,183	1,961	1,653	7,287	1,714	5,925	12,955	19,282
<b>Men</b>										
Total, all sources .....	171,472	107,830	18,629	6,119	7,446	12,982	5,135	22,814	9,012	25,693
Federal, total .....	39,115	24,072	6,721	1,906	779	2,671	987	8,346	1,024	1,638
Dept. of Defense .....	6,780	2,858	809	246	249	1,097	29	190	72	166
Dept. of HHS, total .....	10,743	8,178	1,205	21	73	97	13	6,113	515	141
NIH .....	9,392	7,518	1,040	15	45	68	4	5,822	427	97
Other HHS .....	1,351	660	165	6	28	29	9	291	88	44
NASA .....	1,962	947	422	276	9	101	14	57	7	61
NSF .....	9,559	5,812	2,488	712	283	932	57	844	117	379
USDA .....	1,402	1,254	12	47	4	7	567	415	3	199
All other Federal .....	8,669	5,023	1,785	604	161	437	307	727	310	692
Institutional support .....	71,612	50,383	9,789	2,494	5,311	4,293	2,103	9,803	3,986	12,604
Other non-Federal, total .....	17,302	8,434	1,318	555	317	913	1,027	2,013	430	1,861
All other U.S. ....	14,242	6,606	1,167	433	209	779	812	1,697	410	1,099
Foreign .....	3,060	1,828	151	122	108	134	215	316	20	762
Self-support .....	43,443	24,941	801	1,164	1,039	5,105	1,018	2,652	3,572	9,590
<b>Women</b>										
Total, all sources .....	130,072	88,889	7,099	3,833	3,680	4,488	3,394	22,240	20,020	24,135
Federal, total .....	23,702	15,806	2,358	1,031	257	588	636	7,685	1,864	1,387
Dept. of Defense .....	1,438	775	182	90	34	189	22	154	56	48
Dept. of HHS, total .....	11,642	7,637	677	19	29	26	15	5,702	961	208
NIH .....	8,789	6,995	597	8	25	20	9	5,378	794	164
Other HHS .....	2,853	642	80	11	4	6	6	324	167	44
NASA .....	576	379	154	112	2	17	12	45	7	30
NSF .....	3,891	2,793	836	403	103	232	35	682	162	340
USDA .....	993	920	7	27	3	3	357	387	5	131
All other Federal .....	5,162	3,302	502	380	86	121	195	715	673	630
Institutional support .....	51,178	40,471	3,838	1,719	2,691	1,462	1,530	9,593	7,889	11,749
Other non-Federal, total .....	8,513	5,593	521	286	118	256	532	1,689	884	1,307
All other U.S. ....	7,375	4,824	483	244	87	225	456	1,477	852	1,000
Foreign .....	1,138	769	38	42	31	31	76	212	32	307
Self-support .....	46,679	27,019	382	797	614	2,182	696	3,273	9,383	9,692

See explanatory information, if any, and SOURCE at end of table.

**Table 43. Full-time graduate students in science, engineering, and health fields in doctorate-granting institutions, by sex, primary source of support, and field: 1998**

Sex and source of support	Engineering									Health fields
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
<b>Total</b>										
Total, all sources .....	63,806	2,544	5,547	10,669	19,051	4,768	9,819	3,677	7,731	41,019
Federal, total .....	15,426	1,115	1,682	1,669	4,317	581	2,555	1,429	2,078	7,513
Dept. of Defense .....	4,288	460	153	184	1,832	170	695	342	452	297
Dept. of HHS, total .....	980	9	149	58	132	44	112	15	461	5,590
NIH .....	829	7	119	47	104	38	79	7	428	2,839
Other HHS .....	151	2	30	11	28	6	33	8	33	2,751
NASA .....	1,186	349	97	60	224	24	276	83	73	26
NSF .....	4,711	115	759	544	1,304	176	901	495	417	134
USDA .....	183	0	25	28	12	4	5	5	104	38
All other Federal .....	4,078	182	499	795	813	163	566	489	571	1,428
Institutional support .....	22,804	665	2,086	4,494	6,361	1,694	3,743	1,115	2,646	9,132
Other non-Federal, total .....	9,737	343	937	1,083	3,145	552	1,592	731	1,354	2,051
All other U.S. ....	8,547	286	825	904	2,847	454	1,449	651	1,131	1,640
Foreign .....	1,190	57	112	179	298	98	143	80	223	411
Self-support .....	15,839	421	842	3,423	5,228	1,941	1,929	402	1,653	22,323
<b>Men</b>										
Total, all sources .....	51,324	2,237	4,170	7,839	16,059	3,727	8,625	2,795	5,872	12,318
Federal, total .....	12,582	1,001	1,229	1,202	3,704	464	2,226	1,123	1,633	2,461
Dept. of Defense .....	3,785	435	131	152	1,618	147	623	274	405	137
Dept. of HHS, total .....	719	6	97	36	108	37	95	10	330	1,846
NIH .....	611	5	77	27	86	32	70	5	309	1,263
Other HHS .....	108	1	20	9	22	5	25	5	21	583
NASA .....	992	309	65	42	191	18	247	61	59	23
NSF .....	3,690	99	545	377	1,077	130	774	375	313	57
USDA .....	130	0	15	18	11	4	5	3	74	18
All other Federal .....	3,266	152	376	577	699	128	482	400	452	380
Institutional support .....	18,133	566	1,583	3,255	5,377	1,295	3,286	809	1,962	3,096
Other non-Federal, total .....	7,995	314	712	844	2,663	439	1,404	557	1,062	873
All other U.S. ....	6,970	260	627	693	2,398	358	1,274	491	869	666
Foreign .....	1,025	54	85	151	265	81	130	66	193	207
Self-support .....	12,614	356	646	2,538	4,315	1,529	1,709	306	1,215	5,888
<b>Women</b>										
Total, all sources .....	12,482	307	1,377	2,830	2,992	1,041	1,194	882	1,859	28,701
Federal, total .....	2,844	114	453	467	613	117	329	306	445	5,052
Dept. of Defense .....	503	25	22	32	214	23	72	68	47	160
Dept. of HHS, total .....	261	3	52	22	24	7	17	5	131	3,744
NIH .....	218	2	42	20	18	6	9	2	119	1,576
Other HHS .....	43	1	10	2	6	1	8	3	12	2,168
NASA .....	194	40	32	18	33	6	29	22	14	3
NSF .....	1,021	16	214	167	227	46	127	120	104	77
USDA .....	53	0	10	10	1	0	0	2	30	20
All other Federal .....	812	30	123	218	114	35	84	89	119	1,048
Institutional support .....	4,671	99	503	1,239	984	399	457	306	684	6,036
Other non-Federal, total .....	1,742	29	225	239	482	113	188	174	292	1,178
All other U.S. ....	1,577	26	198	211	449	96	175	160	262	974
Foreign .....	165	3	27	28	33	17	13	14	30	204
Self-support .....	3,225	65	196	885	913	412	220	96	438	16,435

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 44. Full-time graduate science, engineering, and health students with U.S. citizenship or permanent resident status in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all surveyed fields .....	195,780	208,571	217,545	222,441	221,636	219,892	216,332	213,599
Total, science and engineering fields .....	172,601	183,353	189,678	191,755	188,722	185,548	180,435	176,474
Sciences, total .....	136,727	144,791	149,853	152,055	151,523	150,233	146,809	144,311
Physical sciences, total .....	17,865	18,397	18,813	18,640	17,931	17,206	16,377	16,074
Astronomy .....	598	621	638	694	646	642	584	581
Chemistry .....	10,144	10,518	10,861	10,891	10,650	10,466	10,108	9,943
Physics .....	7,041	7,163	7,233	6,941	6,503	5,980	5,591	5,466
Physical sciences, n.e.c. ....	82	95	81	114	132	118	94	84
Earth, atmos., & ocean sci., total .....	7,399	7,867	8,165	8,067	8,176	7,889	7,738	7,798
Atmospheric sciences .....	569	651	706	731	708	709	684	622
Geosciences .....	4,157	4,224	4,295	4,232	4,220	4,102	4,054	3,936
Oceanography .....	1,368	1,502	1,575	1,602	1,605	1,531	1,455	1,523
Earth, atmos., & ocean sci., n.e.c. ....	1,305	1,490	1,589	1,502	1,643	1,547	1,545	1,717
Mathematical sciences .....	7,949	8,481	8,554	8,312	7,777	7,396	6,817	6,639
Computer sciences .....	7,606	8,008	8,145	8,007	7,857	7,538	7,560	7,791
Agricultural sciences .....	6,089	6,305	6,323	6,351	6,430	6,347	6,338	6,317
Biological sciences, total .....	29,830	31,168	32,856	34,554	35,407	35,446	34,960	34,734
Anatomy .....	720	723	738	761	738	825	820	763
Biochemistry .....	3,225	3,314	3,409	3,516	3,598	3,518	3,424	3,460
Biology .....	6,546	6,678	6,920	7,065	6,948	6,935	7,109	6,858
Biometry/epidemiology .....	983	1,147	1,448	1,523	1,593	1,694	1,569	1,953
Biophysics .....	433	479	541	562	602	632	558	545
Botany .....	1,439	1,474	1,534	1,607	1,507	1,501	1,439	1,368
Cell biology .....	2,097	2,269	2,459	2,744	2,903	2,894	2,889	2,951
Ecology .....	758	844	875	1,026	1,122	1,096	1,053	1,074
Entomology/parasitology .....	679	712	718	743	709	742	736	734
Genetics .....	1,065	1,148	1,274	1,205	1,232	1,242	1,235	1,212
Microbio., immunology, & virology .....	3,210	3,306	3,372	3,452	3,538	3,504	3,457	3,474
Nutrition .....	1,714	1,712	1,730	1,980	2,162	2,289	2,180	2,066
Pathology .....	773	818	927	1,027	1,032	1,022	1,139	1,049
Pharmacology .....	1,672	1,717	1,887	2,045	2,000	1,943	1,910	1,978
Physiology .....	1,525	1,528	1,623	1,647	1,867	1,797	1,701	1,573
Zoology .....	1,452	1,474	1,482	1,440	1,513	1,415	1,330	1,252
Biosciences, n.e.c. ....	1,539	1,825	1,919	2,211	2,343	2,397	2,411	2,424
Psychology .....	25,309	26,529	27,106	27,176	27,214	27,499	27,667	27,413
Social sciences, total .....	34,680	38,036	39,891	40,948	40,731	40,912	39,352	37,545
Agricultural economics .....	1,041	1,097	1,048	1,083	1,056	962	881	868
Anthropology (cultural & social) .....	4,272	4,516	4,661	5,051	5,085	5,280	5,034	4,919
Economics (except agricultural) .....	4,927	5,147	5,251	5,206	4,885	4,500	3,916	3,788
Geography .....	1,933	2,150	2,340	2,447	2,350	2,364	2,287	2,200
Linguistics .....	1,467	1,455	1,555	1,533	1,517	1,577	1,453	1,308
Political science .....	11,877	13,435	14,207	13,904	13,485	13,238	12,724	11,934
Sociology .....	4,340	4,834	5,056	5,280	5,392	5,267	5,246	5,061
Sociology/anthropology .....	474	515	541	574	542	525	559	521
Social sciences, other .....	4,349	4,887	5,232	5,870	6,419	7,199	7,252	6,946
Engineering, total .....	35,874	38,562	39,825	39,700	37,199	35,315	33,626	32,163
Aerospace engineering .....	2,137	2,210	2,144	1,834	1,592	1,402	1,312	1,257
Agricultural engineering .....	330	377	403	438	414	393	397	398
Biomedical engineering .....	1,246	1,423	1,544	1,534	1,623	1,657	1,767	1,821
Chemical engineering .....	2,784	2,926	3,084	3,336	3,275	3,342	3,223	3,019
Civil engineering .....	5,891	6,683	7,084	7,481	7,246	7,147	6,694	6,508
Electrical engineering .....	9,589	10,169	10,016	10,003	8,988	8,392	8,179	7,731
Engineering science .....	767	795	822	829	823	628	618	626
Industrial/manufacturing eng. ....	2,639	2,945	3,068	3,025	2,696	2,397	2,284	2,109
Mechanical engineering .....	5,992	6,651	7,075	6,934	6,427	5,875	5,417	5,060
Metallurgical/materials eng. ....	2,057	2,239	2,253	2,315	2,147	1,956	1,885	1,856
Nuclear engineering .....	590	611	634	618	536	487	434	389
Engineering, other .....	1,852	1,533	1,698	1,353	1,432	1,639	1,416	1,389
Total, health fields .....	23,179	25,218	27,867	30,686	32,914	34,344	35,897	37,125
Clinical fields .....	1,368	1,502	1,665	1,834	1,919	2,002	2,272	2,262
Dental sciences .....	652	760	769	838	856	835	928	973
Nursing .....	5,444	5,425	5,748	6,495	6,927	6,953	7,224	7,010
Pharmaceutical sciences .....	1,214	1,100	1,176	1,317	1,195	1,173	1,172	1,168
Preventive medicine/community health .....	3,410	3,912	4,375	4,620	5,129	4,900	4,777	5,580
Speech pathology/audiology .....	4,861	5,420	5,995	6,358	6,482	6,895	7,123	7,192
Veterinary sciences .....	487	515	459	474	481	459	705	738
Other health fields .....	5,743	6,584	7,680	8,750	9,925	11,127	11,696	12,202

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 45. Full-time graduate science, engineering, and health students without U.S. citizenship or permanent resident status in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all surveyed fields .....	92,470	93,655	90,650	87,376	84,489	84,828	86,006	87,945
Total, science and engineering fields .....	88,815	90,055	86,931	83,857	80,948	80,974	82,176	84,051
Sciences, total .....	55,609	56,380	55,075	54,045	52,312	52,215	51,967	52,408
Physical sciences, total .....	11,588	11,677	11,133	10,721	10,302	10,111	9,891	9,654
Astronomy .....	212	219	210	259	225	212	184	206
Chemistry .....	6,193	6,136	5,939	5,810	5,688	5,607	5,475	5,338
Physics .....	5,157	5,289	4,947	4,602	4,347	4,263	4,204	4,073
Physical sciences, n.e.c. ....	26	33	37	50	42	29	28	37
Earth, atmos., & ocean sci., total .....	2,524	2,618	2,634	2,817	2,552	2,366	2,196	2,154
Atmospheric sciences .....	288	307	272	250	248	268	280	232
Geosciences .....	1,378	1,484	1,504	1,544	1,388	1,292	1,167	1,109
Oceanography .....	563	559	555	661	578	507	469	482
Earth, atmos., & ocean sci., n.e.c. ....	295	268	303	362	338	299	280	331
Mathematical sciences .....	5,678	5,535	5,290	5,187	4,966	4,928	4,712	4,487
Computer sciences .....	7,264	7,761	7,682	7,382	7,359	8,095	8,942	9,679
Agricultural sciences .....	2,784	2,804	2,779	2,781	2,726	2,535	2,339	2,212
Biological sciences, total .....	11,452	11,664	11,803	11,656	11,028	10,391	10,103	10,320
Anatomy .....	241	237	239	222	240	217	213	198
Biochemistry .....	1,715	1,716	1,729	1,685	1,567	1,431	1,352	1,377
Biology .....	1,746	1,766	1,714	1,629	1,614	1,604	1,691	1,696
Biometry/epidemiology .....	448	487	542	533	500	468	436	606
Biophysics .....	246	249	214	208	198	175	170	162
Botany .....	847	805	817	738	639	627	610	621
Cell biology .....	619	692	727	848	789	775	760	777
Ecology .....	150	132	165	161	154	143	131	133
Entomology/parasitology .....	335	304	321	323	332	285	259	266
Genetics .....	306	340	366	348	340	363	385	367
Microbio., immunology, & virology .....	1,191	1,139	1,228	1,246	1,128	1,027	951	929
Nutrition .....	1,109	1,062	1,180	1,092	1,110	1,007	947	909
Pathology .....	312	320	337	332	318	317	279	278
Pharmacology .....	632	680	612	627	529	556	536	555
Physiology .....	638	632	597	574	509	420	401	417
Zoology .....	308	294	261	272	228	210	183	166
Biosciences, n.e.c. ....	609	809	754	818	833	766	799	863
Psychology .....	1,506	1,504	1,472	1,659	1,514	1,489	1,527	1,619
Social sciences, total .....	12,813	12,817	12,282	11,842	11,865	12,300	12,257	12,283
Agricultural economics .....	935	972	862	809	892	797	816	782
Anthropology (cultural & social) .....	715	715	671	667	577	586	592	630
Economics (except agricultural) .....	4,616	4,669	4,526	4,448	4,517	4,732	4,626	4,529
Geography .....	392	417	420	384	391	393	427	467
Linguistics .....	1,043	946	892	887	865	856	819	836
Political science .....	2,668	2,669	2,653	2,507	2,537	2,836	2,722	2,802
Sociology .....	1,266	1,246	1,111	1,015	892	898	942	911
Sociology/anthropology .....	109	97	72	70	75	65	72	87
Social sciences, other .....	1,069	1,086	1,075	1,055	1,119	1,137	1,241	1,239
Engineering, total .....	33,206	33,675	31,856	29,812	28,636	28,759	30,209	31,643
Aerospace engineering .....	1,121	1,059	1,083	1,133	1,076	1,143	1,193	1,287
Agricultural engineering .....	493	463	432	441	445	406	351	358
Biomedical engineering .....	654	715	690	712	654	624	644	654
Chemical engineering .....	2,969	2,974	2,918	2,718	2,630	2,514	2,490	2,528
Civil engineering .....	5,101	5,333	4,898	4,694	4,535	4,234	4,206	4,161
Electrical engineering .....	9,624	10,079	9,666	8,729	8,588	9,004	10,132	11,320
Engineering science .....	590	613	573	514	418	426	398	485
Industrial/manufacturing eng. ....	2,758	2,898	2,614	2,660	2,408	2,563	2,630	2,659
Mechanical engineering .....	5,423	5,428	5,053	4,708	4,506	4,562	4,757	4,759
Metallurgical/materials eng. ....	1,981	2,016	1,973	1,769	1,717	1,731	1,761	1,821
Nuclear engineering .....	490	473	436	379	347	284	274	273
Engineering, other .....	2,002	1,624	1,520	1,355	1,312	1,268	1,373	1,338
Total, health fields .....	3,655	3,600	3,719	3,519	3,541	3,854	3,830	3,894
Clinical fields .....	314	371	383	356	252	232	214	212
Dental sciences .....	223	228	236	210	240	281	307	310
Nursing .....	230	202	227	275	284	242	294	299
Pharmaceutical sciences .....	984	974	954	871	957	1,052	1,062	1,046
Preventive medicine/community health .....	961	838	865	722	721	788	762	796
Speech pathology/audiology .....	280	288	300	293	248	258	264	306
Veterinary sciences .....	219	228	214	205	238	263	267	220
Other health fields .....	444	471	540	587	601	738	660	705

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
Total, all institutions	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919
1 University of Michigan	4,772	5,069	5,094	5,067	4,890	4,966	4,665	4,545
2 Texas A&M University	4,962	5,250	5,117	4,788	4,526	4,752	4,620	4,505
3 Stanford University	4,294	4,490	4,661	4,495	4,526	4,510	4,322	4,469
4 University of Calif at Berkeley	4,516	4,559	4,481	4,430	4,460	4,453	4,345	4,390
5 University of Minnesota	5,148	5,168	5,316	5,072	4,836	4,713	4,487	4,369
6 University of Southern California	5,171	5,399	5,260	4,546	4,272	4,126	4,259	4,333
7 Univ of Illinois at Urbana-Champaign	4,825	4,929	4,998	4,885	4,920	4,573	4,389	4,301
8 University of Wisconsin-Madison	5,257	5,412	5,466	5,294	5,044	4,698	4,507	4,250
9 University of Colorado	3,834	4,175	4,220	4,009	4,067	4,307	4,162	4,167
10 Massachusetts Institute of Technology	4,308	4,342	4,382	4,343	4,206	4,168	4,074	4,145
Total, 1st 10 institutions	47,087	48,793	48,995	46,929	45,747	45,266	43,830	43,474
11 University of Maryland - College Park	3,812	3,899	3,972	4,008	4,024	4,026	3,880	3,887
12 Pennsylvania State University	4,244	4,250	4,261	4,223	4,271	4,054	3,951	3,837
13 University of Washington	3,876	3,783	3,748	3,764	3,757	3,639	3,734	3,821
14 Ohio State University	4,596	4,607	4,671	4,420	4,332	4,053	3,764	3,818
15 University of Texas at Austin	4,559	4,715	4,722	4,550	4,199	3,529	3,860	3,794
16 University of California, Los Angeles	3,211	3,271	3,448	3,832	3,626	3,551	3,412	3,613
17 George Washington University	4,207	4,584	4,517	4,532	4,305	4,150	3,851	3,591
18 Georgia Institute of Technology	3,326	3,548	3,649	3,688	3,540	3,472	3,412	3,572
19 University of Florida	3,224	3,471	3,583	3,502	3,427	3,400	3,411	3,496
20 North Carolina State University	3,035	3,230	3,034	3,342	3,405	3,492	3,553	3,425
Total, 1st 20 institutions	85,177	88,151	88,600	86,790	84,633	82,632	80,658	80,328
21 Purdue University	3,739	3,871	3,871	3,854	3,718	3,566	3,436	3,411
22 Cornell University	3,376	3,700	3,707	3,683	3,640	3,495	3,225	3,353
23 Virginia Polytechnic Inst and State Univ	3,158	3,326	3,381	3,298	3,506	3,572	3,419	3,275
24 Arizona State University	2,893	3,156	3,154	3,077	3,080	3,084	3,100	3,107
25 Rutgers the State Univ of New Jersey	3,991	3,975	3,920	3,867	3,802	3,645	3,441	3,081
26 Harvard University	3,032	3,253	3,244	3,231	3,185	3,097	3,024	3,016
27 New York University	2,702	2,847	2,833	2,668	2,606	2,886	2,791	2,914
28 George Mason University	2,102	2,218	2,566	2,682	3,101	2,922	2,930	2,872
29 Louisiana State University	2,738	2,916	3,036	3,127	3,184	3,133	3,003	2,834
30 Michigan State University	2,906	3,093	3,171	3,064	3,005	2,981	2,862	2,826
Total, 1st 30 institutions	115,814	120,506	121,483	119,341	117,460	115,013	111,889	111,017
31 Indiana University	3,255	3,458	3,597	3,530	3,505	3,349	2,965	2,801
32 University of Arizona	3,146	3,203	3,248	3,227	3,004	2,898	2,851	2,743
33 University of Massachusetts	2,629	2,626	2,675	2,758	2,757	2,697	2,671	2,700
34 University of Pittsburgh	2,749	3,081	3,067	3,119	2,946	2,761	2,693	2,532
35 University of Kansas	1,919	2,015	2,027	2,551	2,459	2,826	2,718	2,518
36 University of Calif at Davis	2,563	2,584	2,554	2,495	2,425	2,473	2,529	2,515
37 Iowa State University	2,768	2,817	2,876	2,799	2,676	2,693	2,608	2,478
38 Columbia Univ in the City of New York	2,413	2,448	2,397	2,411	2,309	2,442	2,385	2,469
39 Boston University	2,162	2,220	2,376	2,496	2,442	2,446	2,407	2,450
40 SUNY at Buffalo	2,871	2,882	2,911	2,784	2,679	2,527	2,443	2,449
Total, 1st 40 institutions	142,289	147,840	149,211	147,511	144,662	142,125	138,159	136,672
41 University of Illinois at Chicago	2,341	2,404	2,307	2,160	2,088	2,097	2,215	2,208
42 Univ of North Carolina at Chapel Hill	2,180	2,350	2,375	2,344	2,282	2,269	2,175	2,166
43 SUNY at Albany	1,328	1,791	1,884	1,760	1,665	2,038	2,056	2,079
44 Wayne State University	2,653	2,786	2,925	2,910	2,694	2,420	2,385	2,059
45 CUNY Graduate School and Univ Center	1,776	1,795	1,664	1,699	1,573	1,529	2,022	2,022
46 Teachers College, Columbia University	1,528	1,533	1,629	1,661	1,741	1,842	1,906	1,998
47 University of Tennessee at Knoxville	2,358	2,458	2,489	2,489	2,283	2,082	1,937	1,987
48 Illinois Institute of Technology	1,818	1,916	2,079	1,913	1,542	2,138	2,058	1,983
49 DePaul University	1,381	1,359	1,435	1,460	1,467	1,640	1,743	1,942
50 University of Pennsylvania	2,477	2,472	2,456	2,360	2,386	2,104	1,929	1,933
Total, 1st 50 institutions	162,129	168,704	170,454	168,267	164,383	162,284	158,585	157,049
51 University of Cincinnati	2,223	2,161	2,175	2,233	2,267	2,183	1,945	1,930
52 Carnegie Mellon University	1,668	1,684	1,664	1,628	1,648	1,700	1,763	1,922
53 University of Chicago	1,859	2,075	2,046	2,153	2,070	1,954	1,941	1,918
54 New Jersey Institute of Technology	1,848	1,820	1,742	1,664	1,711	1,705	1,874	1,917
55 SUNY at Stony Brook	1,955	2,128	2,131	2,142	2,108	1,953	1,892	1,912
56 University of Calif at San Diego	1,804	1,795	1,798	1,781	1,814	1,812	1,846	1,890
57 American University	1,656	2,042	2,305	2,280	2,166	2,034	1,951	1,857
58 Oklahoma State University	1,794	1,823	1,773	1,747	1,785	1,719	1,718	1,851
59 Johns Hopkins University	1,249	1,377	1,389	1,610	1,645	1,677	1,734	1,835
60 University of Connecticut	2,024	2,186	2,218	2,102	2,081	2,004	1,881	1,826
Total, 1st 60 institutions	180,209	187,795	189,695	187,607	183,678	181,025	177,130	175,907

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
61 University of Houston .....	2,920	2,969	2,785	1,985	1,844	1,826	1,858	1,826
62 Colorado State University .....	1,793	1,882	1,973	1,956	1,927	1,751	1,770	1,738
63 Northeastern University .....	2,058	2,094	2,036	1,973	1,815	1,801	1,741	1,724
64 Nova Southeastern University .....	1,140	1,237	1,503	1,778	1,808	1,712	1,710	1,722
65 University of Georgia .....	1,598	1,702	1,781	1,855	1,837	1,798	1,818	1,715
66 Kansas State University .....	1,540	1,618	1,732	1,781	1,777	1,709	1,679	1,669
67 University of South Florida .....	1,526	1,710	1,844	1,743	1,744	1,699	1,700	1,655
68 University of New Mexico .....	1,625	1,674	1,862	1,817	1,819	1,735	1,607	1,612
69 University of Virginia .....	1,874	1,915	1,923	1,878	1,798	1,731	1,669	1,610
70 Syracuse University .....	1,928	2,042	1,823	1,817	1,518	1,516	1,341	1,591
Total, 1st 70 institutions .....	198,211	206,638	208,957	206,190	201,565	198,303	194,023	192,769
71 University of Massachusetts Lowell .....	1,796	1,764	1,552	1,679	1,783	1,646	1,515	1,576
72 University of Hawaii at Manoa .....	1,719	1,667	1,747	1,843	1,763	1,734	1,598	1,575
73 University of Kentucky .....	1,626	1,754	1,731	1,800	1,791	1,708	1,657	1,575
74 Drexel University .....	1,534	1,431	1,400	1,534	1,405	1,425	1,594	1,557
75 Rensselaer Polytechnic Institute .....	2,036	2,040	2,024	1,933	1,694	1,508	1,623	1,557
76 University of Nebraska - Lincoln .....	1,721	1,879	1,979	1,982	1,833	1,758	1,624	1,550
77 University of Utah .....	1,627	1,701	1,695	1,684	1,814	1,690	1,586	1,550
78 University of Calif at Santa Barbara .....	1,482	1,526	1,394	1,439	1,444	1,439	1,412	1,538
79 Clemson University .....	1,729	1,910	1,830	1,757	1,686	1,658	1,596	1,529
80 University of Oklahoma .....	1,846	2,015	1,953	1,774	1,703	1,732	1,547	1,527
Total, 1st 80 institutions .....	215,327	224,325	226,262	223,615	218,481	214,601	209,775	208,303
81 University of Central Florida .....	1,218	1,352	1,457	1,615	524	1,579	1,510	1,508
82 Western Michigan University .....	1,536	1,543	1,566	1,548	1,326	1,311	1,417	1,500
83 Northwestern University .....	1,800	1,843	1,799	1,719	1,645	1,638	1,516	1,479
84 University of Missouri-Columbia .....	1,811	1,821	1,842	1,789	1,743	1,605	1,552	1,464
85 Mississippi State University .....	1,151	1,150	1,210	1,165	1,119	1,132	1,149	1,458
86 Auburn University .....	1,732	1,772	1,887	1,854	1,849	1,687	1,529	1,451
87 University of Iowa .....	1,795	1,726	1,746	1,714	1,687	1,601	1,505	1,437
88 University of Delaware .....	1,396	1,429	1,497	1,505	1,493	1,409	1,377	1,429
89 University of Texas at Arlington .....	1,865	1,936	1,945	1,810	1,609	1,554	1,463	1,407
90 West Virginia University .....	1,234	1,320	1,443	1,409	1,324	1,285	1,414	1,406
Total, 1st 90 institutions .....	230,865	240,217	242,654	239,743	232,800	229,402	224,207	222,842
91 Duke University .....	1,333	1,335	1,363	1,361	1,337	1,310	1,337	1,400
92 Oregon State University .....	1,759	1,761	1,904	1,887	1,891	1,796	1,651	1,397
93 California State University, Long Beach .....	1,940	1,883	1,682	1,486	1,428	1,383	1,317	1,351
94 Case Western Reserve University .....	1,398	1,439	1,423	1,447	1,422	1,426	1,433	1,349
95 Texas Tech University .....	1,371	1,541	1,487	1,432	1,343	1,264	1,294	1,325
96 University of South Carolina .....	1,466	1,590	1,660	1,649	1,604	1,448	1,450	1,325
97 University of California, Irvine .....	1,306	1,445	1,493	1,442	1,392	1,357	1,309	1,319
98 Yale University .....	1,620	1,581	1,561	1,549	1,539	1,456	1,312	1,315
99 Princeton University .....	1,374	1,379	1,367	1,298	1,307	1,266	1,240	1,309
100 University of North Texas .....	1,043	1,329	1,308	1,287	1,230	1,205	1,297	1,296
Total, 1st 100 institutions .....	245,475	255,500	257,902	254,581	247,293	243,313	237,847	236,228
101 University of Wisconsin-Milwaukee .....	1,625	1,586	1,538	1,484	1,427	1,384	1,327	1,286
102 Old Dominion University .....	1,100	1,077	1,244	1,232	1,237	1,248	1,274	1,281
103 Florida State University .....	1,360	1,335	1,377	1,402	1,506	1,389	1,306	1,266
104 Southern Illinois Univ at Carbondale .....	1,365	1,305	1,326	1,304	1,282	1,213	1,154	1,246
105 San Diego State University .....	1,371	1,499	1,544	1,473	1,148	1,277	1,246	1,237
106 Washington University .....	1,353	1,390	1,361	1,339	1,308	1,226	1,196	1,232
107 University of Akron .....	1,314	1,348	1,321	1,320	1,344	1,369	1,361	1,231
108 University of Idaho .....	1,068	1,063	1,115	1,145	1,081	1,018	1,149	1,208
109 Polytechnic University .....	1,600	1,649	1,559	1,438	1,505	1,427	1,372	1,200
110 Washington State University .....	1,255	1,306	1,359	1,421	1,450	1,391	1,228	1,200
Total, 1st 110 institutions .....	258,886	269,058	271,646	268,139	260,581	256,255	250,460	248,615
111 University of Arkansas Main .....	943	1,027	1,202	1,225	1,321	1,236	1,062	1,195
112 Southern Methodist University .....	815	950	997	1,031	1,131	1,222	1,260	1,167
113 Stevens Institute of Technology .....	1,313	1,335	1,416	1,360	1,305	1,390	1,326	1,163
114 Vanderbilt University .....	965	970	1,026	1,117	1,137	1,154	1,129	1,121
115 Utah State University .....	1,187	1,272	1,363	1,370	1,337	1,229	1,143	1,120
116 Univ of Puerto Rico Rio Piedras Campus .....	1,008	1,096	1,138	1,129	1,083	1,065	1,086	1,113
117 University of Texas at Dallas .....	980	1,002	1,017	946	944	1,033	1,134	1,109
118 University of Alabama at Birmingham, The .....	759	792	827	815	789	920	1,028	1,101
119 Antioch University .....	1,531	1,617	1,532	1,590	1,474	1,430	1,320	1,083
120 Portland State University .....	968	1,032	1,026	1,061	1,009	1,026	1,001	1,072
Total, 1st 120 institutions .....	269,355	280,151	283,190	279,783	272,111	267,960	261,949	259,859

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
121 SUNY at Binghamton .....	1,142	1,141	1,129	1,132	1,093	1,072	1,093	1,067
122 Brigham Young University .....	927	1,016	1,069	1,193	1,154	1,188	1,179	1,059
123 New Mexico State University .....	956	1,271	1,295	1,239	1,208	1,168	1,090	1,053
124 University of Rochester .....	1,349	1,361	1,372	1,305	1,226	1,146	1,097	1,032
125 Virginia Commonwealth University .....	1,144	1,160	1,157	1,139	1,213	1,146	1,022	1,024
126 Florida International University .....	740	783	856	1,036	1,083	1,046	1,041	1,015
127 Georgia State University .....	950	1,025	999	1,097	1,102	1,024	1,032	1,004
128 New School University .....	908	1,164	1,029	1,032	1,008	1,031	1,060	1,000
129 University of Alabama, The .....	882	934	974	963	985	1,070	1,040	1,000
130 University of Louisville .....	1,084	1,132	1,122	1,125	1,099	1,095	963	998
Total, 1st 130 institutions .....	279,437	291,138	294,192	291,044	283,282	278,946	272,566	270,111
131 University of Miami .....	1,150	1,189	1,196	1,252	1,172	1,095	1,012	996
132 Northern Illinois University .....	1,023	1,025	1,065	1,097	1,109	1,055	1,034	993
133 Lehigh University .....	1,022	1,114	1,099	1,085	999	1,072	1,030	987
134 Wichita State University .....	643	742	712	705	761	812	865	986
135 California Institute of Technology .....	1,125	1,152	1,131	1,087	1,073	1,022	1,031	982
136 Tufts University .....	927	999	1,044	1,061	1,008	1,062	1,052	978
137 University of Nevada, Reno .....	825	922	911	956	963	918	956	966
138 Fielding Institute, The .....	478	475	513	484	899	905	948	937
139 Long Island University .....	862	1,112	1,142	1,041	1,137	1,089	1,069	935
140 Univ of Maryland - Baltimore County .....	1,015	1,040	1,052	1,035	1,027	964	869	929
Total, 1st 140 institutions .....	288,507	300,908	304,057	300,847	293,430	288,940	282,432	279,800
141 University of Toledo .....	695	742	754	750	818	963	925	915
142 Temple University .....	1,189	1,164	1,241	1,163	1,078	1,264	979	910
143 University of Memphis .....	851	832	885	927	873	757	1,037	897
144 Ohio University .....	959	970	942	927	921	928	940	896
145 US Naval Postgraduate School .....	1,329	1,305	1,280	1,195	1,049	927	872	890
146 Wright State University .....	893	909	864	815	845	873	851	867
147 University of Missouri-Rolla .....	1,261	1,216	1,144	1,021	1,016	914	886	848
148 Oakland University .....	678	665	700	706	803	819	841	841
149 Santa Clara University .....	1,222	1,226	1,144	952	945	927	956	841
150 University of Notre Dame .....	804	872	868	855	859	873	846	826
Total, 1st 150 institutions .....	298,388	310,809	313,879	310,158	302,637	298,185	291,565	288,531
151 New York Institute of Technology .....	887	1,025	997	961	1,013	960	872	819
152 Worcester Polytechnic Institute .....	865	704	712	711	634	603	596	816
153 Florida Atlantic University .....	822	940	1,006	980	929	895	857	810
154 Fairleigh Dickinson University .....	1,005	1,070	1,020	849	841	871	841	804
155 University of Rhode Island .....	1,095	1,149	1,148	1,129	1,096	900	800	800
156 Loyola University of Chicago .....	610	633	645	701	794	832	831	793
157 University of Wyoming .....	820	835	877	877	818	761	846	789
158 Kent State University .....	807	830	806	811	849	799	824	786
159 University of Denver .....	944	809	831	858	808	768	727	768
160 Colorado School of Mines .....	781	889	869	851	806	778	765	762
Total, 1st 160 institutions .....	307,024	319,693	322,790	318,886	311,225	306,352	299,524	296,478
161 Rice University .....	825	852	844	811	752	723	737	746
162 Tulane University .....	751	824	860	897	834	829	726	743
163 Florida Institute of Technology .....	882	904	828	801	754	756	743	740
164 University of Calif at Riverside .....	733	757	763	729	795	757	785	739
165 University of New Hampshire .....	634	669	687	660	689	795	757	737
166 University of Calif at Santa Cruz .....	628	671	690	717	732	732	726	734
167 Marshall University .....	204	198	204	224	250	264	544	723
168 Pepperdine University .....	935	1,040	1,084	1,039	943	806	739	713
169 Univ of Puerto Rico Mayaguez Campus .....	439	495	524	520	582	663	727	712
170 Emory University .....	549	595	649	685	719	713	711	707
Total, 1st 170 institutions .....	313,604	326,698	329,923	325,969	318,275	313,390	306,719	303,772
171 Marquette University .....	620	596	578	600	556	591	626	707
172 Brown University .....	781	847	797	766	760	733	717	701
173 Calif Sch of Prof Psych - Los Angeles .....	534	495	537	541	361	280	725	686
174 Loyola College .....	755	823	861	853	756	745	699	684
175 University of Oregon .....	822	845	787	778	771	703	675	682
176 University of Alabama in Huntsville, The .....	1,018	939	1,012	926	819	706	697	680
177 Cleveland State University .....	1,142	1,141	1,160	1,151	1,122	758	774	670
178 Claremont Graduate School .....	552	573	613	683	659	684	712	655
179 Southwest Texas State University .....	600	626	656	689	703	698	624	643
180 Georgetown University .....	633	690	693	744	746	716	722	641
Total, 1st 180 institutions .....	321,061	334,273	337,617	333,700	325,528	320,004	313,690	310,521

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
181 Yeshiva University .....	607	609	561	571	585	579	594	634
182 Calif Sch of Prof Psych - San Diego .....	617	592	643	582	573	618	642	620
183 Villanova University .....	959	938	884	857	758	702	727	607
184 University of Mississippi .....	661	661	659	714	700	682	631	599
185 Howard University .....	739	657	677	761	741	727	698	592
186 University of Maine .....	706	811	783	757	737	666	584	586
187 University of Montana .....	520	588	601	588	593	550	552	583
188 University of Texas at El Paso .....	656	755	667	660	578	588	579	576
189 University of Southern Mississippi .....	442	444	462	548	634	604	582	573
190 Loma Linda University .....	105	150	138	169	194	278	533	570
Total, 1st 190 institutions .....	327,073	340,478	343,692	339,907	331,621	325,998	319,812	316,461
191 Montana State University-Bozeman .....	482	559	626	605	594	569	551	569
192 Univ of Texas Hlth Sci Ctr at Houston .....	428	495	499	541	560	588	584	566
193 Pace University .....	855	791	845	808	564	829	564	561
194 Walden University .....	0	0	0	0	0	223	310	555
195 Brandeis University .....	428	432	465	473	524	565	549	550
196 Rochester Institute of Technology .....	952	1,006	896	776	623	621	560	548
197 Illinois State University .....	505	550	544	514	549	564	547	547
198 Michigan Technological University .....	483	510	554	573	584	555	543	546
199 Allegheny University of Health Sciences .....	387	396	409	422	513	482	510	544
200 Seton Hall University .....	396	413	430	394	610	577	546	543
Total, 1st 200 institutions .....	331,989	345,630	348,960	345,013	336,742	331,571	325,076	321,990
201 University of Vermont .....	623	648	632	629	680	570	538	541
202 Northern Arizona University .....	783	763	572	587	572	549	517	538
203 North Dakota State University .....	599	616	590	606	589	584	536	525
204 Texas Woman's University .....	510	518	498	508	503	573	526	521
205 University of Alaska Fairbanks .....	480	571	603	627	600	587	571	503
206 Caribbean Center for Advanced Studies .....	386	299	181	203	325	320	319	502
207 University of Nevada at Las Vegas .....	357	421	495	531	567	521	510	495
208 Bowling Green State University .....	556	591	659	667	708	609	573	492
209 Miami University (OH) .....	458	460	507	518	483	425	434	483
210 University of Nebraska - Omaha .....	559	630	631	595	535	526	514	483
Total, 1st 210 institutions .....	337,300	351,147	354,328	350,484	342,304	336,835	330,114	327,073
211 University of Dayton .....	788	739	804	788	651	635	551	482
212 Catholic University of America .....	684	736	739	672	602	598	518	480
213 Saint John's University .....	457	533	558	556	530	469	455	466
214 University of Missouri-Kansas City .....	552	543	490	431	512	470	467	465
215 Central Michigan University .....	292	341	324	353	363	422	425	462
216 Fordham University .....	598	584	633	559	500	472	471	458
217 Boston College .....	464	472	475	493	480	495	464	454
218 Ball State University .....	335	395	412	436	442	486	482	453
219 University of North Dakota .....	281	324	339	335	333	324	324	451
220 University of Detroit Mercy .....	599	620	596	626	607	484	454	441
Total, 1st 220 institutions .....	342,350	356,434	359,698	355,733	347,324	341,690	334,725	331,685
221 Saint Louis University .....	395	438	453	478	479	475	430	430
222 Air Force Institute of Technology .....	589	588	550	481	514	533	504	426
223 SUNY College of Env Science and Forestry .....	427	457	428	415	410	395	400	426
224 South Dakota State University .....	482	485	521	498	499	497	459	421
225 Union Institute .....	523	381	724	673	512	302	274	410
226 East Carolina University .....	259	343	375	313	333	331	331	405
227 University of Southwestern Louisiana .....	562	583	483	466	429	469	438	402
228 College of William and Mary .....	371	431	432	436	450	434	394	401
229 Tennessee State University .....	226	242	216	327	388	375	382	401
230 Golden Gate University .....	192	215	157	331	476	381	488	389
Total, 1st 230 institutions .....	346,376	360,597	364,037	360,151	351,814	345,882	338,825	335,796
231 Sam Houston State University .....	362	355	375	386	374	369	315	387
232 University of Missouri-St. Louis .....	281	323	310	425	455	438	392	382
233 Texas A&M University-Kingsville .....	306	415	456	393	408	378	484	381
234 Fuller Theological Seminary .....	343	352	373	381	416	408	396	369
235 University of Calif at San Francisco .....	299	299	315	352	330	338	330	362
236 California Institute of Integral Studies .....	362	362	447	416	450	487	381	360
237 Hofstra University .....	402	349	342	356	346	335	371	360
238 Adelphi University .....	380	387	317	271	248	287	318	355
239 Univ of Texas SW Medical Ctr at Dallas .....	284	349	361	385	381	379	352	355
240 University of Maryland at Baltimore .....	355	360	320	324	285	315	333	349
Total, 1st 240 institutions .....	349,750	364,148	367,653	363,840	355,507	349,616	342,497	339,456

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
241 Duquesne University .....	222	261	280	382	335	393	337	341
242 Univ of North Carolina at Greensboro .....	303	351	355	370	305	288	295	339
243 University of South Alabama .....	342	362	318	328	326	367	338	336
244 University of Bridgeport .....	33	133	148	135	148	172	298	327
245 Indiana University of Pennsylvania .....	140	158	203	301	333	296	317	321
246 Clark Atlanta University .....	323	387	386	418	382	374	347	319
247 Baylor College of Medicine .....	246	262	279	273	285	284	302	317
248 Tennessee Technological University .....	323	336	314	319	323	307	308	315
249 Jackson State University .....	251	263	304	332	328	322	324	313
250 Indiana State University .....	319	307	330	343	345	346	369	312
Total, 1st 250 institutions .....	352,252	366,968	370,570	367,041	358,617	352,765	345,732	342,696
251 University of Tulsa .....	280	321	339	346	350	310	300	312
252 Texas A&M University-Commerce .....	346	340	303	245	244	244	278	310
253 Calif Sch of Prof Psych - Fresno .....	366	385	393	370	399	411	339	308
254 Dartmouth College .....	362	381	384	371	363	351	357	308
255 US International University .....	492	468	473	419	378	378	409	300
256 University of Hartford .....	235	239	288	271	272	288	249	295
257 Wright Institute, The .....	199	208	221	242	253	248	245	293
258 Middle Tennessee State University .....	529	580	596	557	435	441	323	287
259 Pacific Graduate School of Psychology .....	341	373	348	351	314	349	299	285
260 Baylor University .....	284	337	352	363	337	332	298	282
Total, 1st 260 institutions .....	355,686	370,600	374,267	370,576	361,962	356,117	348,829	345,676
261 Lamar University .....	401	457	397	349	295	290	294	280
262 Louisiana Tech University .....	284	364	386	345	303	306	327	280
263 Oregon Grad Inst of Science & Technology .....	213	291	320	318	287	205	301	279
264 Clark University .....	275	273	266	261	351	320	269	277
265 East Tennessee State University .....	265	267	311	304	321	325	392	268
266 Idaho State University .....	264	291	364	374	377	325	277	266
267 Cal Schl of Prof Psych Berkeley/Alameda .....	519	528	508	455	428	370	286	262
268 Thomas Jefferson University .....	183	212	224	249	297	307	281	260
269 Stephen F. Austin State University .....	201	231	230	260	243	247	271	254
270 Finch U of Hlth Sci/The Chicago Med Sch .....	124	130	137	133	269	288	277	253
Total, 1st 270 institutions .....	358,415	373,644	377,410	373,624	365,133	359,100	351,804	348,355
271 Wake Forest University .....	229	231	245	290	272	276	275	245
272 New Mexico Institute of Mining and Tech .....	253	260	255	232	222	233	224	232
273 Medical University of South Carolina .....	154	173	192	193	237	238	235	225
274 Forest Institute of Professional Psych .....	206	185	169	162	148	166	181	224
275 Florida A&M University .....	133	130	177	229	268	251	243	218
276 Univ of Med and Dentistry of New Jersey .....	239	188	204	225	206	197	198	214
277 James Madison University .....	108	113	120	97	103	104	166	212
278 CUNY Hunter College .....	419	414	383	378	374	203	186	206
279 South Dakota School of Mines and Tech .....	274	248	219	194	208	196	183	205
280 University of South Dakota .....	202	219	207	207	221	225	209	203
Total, 1st 280 institutions .....	360,632	375,805	379,581	375,831	367,392	361,189	353,904	350,539
281 Chicago School of Prof Psych .....	134	139	148	159	169	180	183	199
282 Medical College of Wisconsin .....	107	120	119	126	125	117	144	199
283 CUNY Mt. Sinai School of Medicine .....	164	156	170	169	174	178	183	192
284 University of Northern Colorado .....	182	224	231	216	166	180	181	192
285 Univ of Texas Hlth Sci Ctr San Antonio .....	133	157	163	168	169	182	189	190
286 Slippery Rock University of Pennsylvania .....	193	177	191	123	123	168	158	189
287 Philadelphia Col of Osteopathic Med .....	0	0	0	0	85	120	157	188
288 University of La Verne .....	125	176	202	118	154	130	204	188
289 American International College .....	164	169	123	123	124	122	184	184
290 University of Tennessee, Memphis .....	112	131	150	157	156	134	158	181
Total, 1st 290 institutions .....	361,946	377,254	381,078	377,190	368,837	362,700	355,645	352,441
291 Clarkson University .....	286	279	287	254	239	226	216	180
292 New York Medical College .....	160	179	199	241	239	238	188	174
293 Mercer University .....	113	154	147	147	154	147	167	161
294 Northeast Louisiana University .....	101	108	118	147	119	172	181	157
295 Univ of Texas Med Branch at Galveston .....	128	139	145	158	152	140	160	148
296 University of Arkansas - Med Sci Campus .....	61	75	104	113	124	138	131	145
297 Mayo Graduate School .....	104	116	120	114	136	133	141	142
298 Spalding University .....	107	112	91	115	117	125	137	137
299 Oregon Health Sciences University .....	118	120	126	138	143	135	123	136
300 Alabama A&M University .....	254	268	312	272	202	194	250	134
Total, 1st 300 institutions .....	363,378	378,804	382,727	378,889	370,462	364,348	357,339	353,955

See explanatory information, if any, and SOURCE at end of table.

**Table 46. Graduate students in science and engineering fields in doctorate-granting institutions, ranked by 1998 total graduate science and engineering students: 1991-1998**

Institutional ranking	1991	1992	1993	1994	1995	1996	1997	1998
301 Woods Hole Oceanographic Institution .....	102	113	112	120	115	137	137	134
302 Alfred University .....	115	124	144	174	154	170	129	130
303 Eastern Virginia Medical School .....	118	126	138	156	155	136	139	130
304 Meharry Medical College .....	54	60	69	144	140	139	131	125
305 University of Maryland Eastern Shore .....	104	115	90	104	89	98	113	123
306 Texas Christian University .....	124	140	149	146	153	142	136	122
307 Hampton University .....	64	83	90	129	123	98	76	118
308 University of Northern Iowa .....	77	74	92	154	173	168	155	118
309 Wesleyan University .....	128	132	139	143	120	120	119	117
310 The Rockefeller University .....	128	134	136	132	125	93	105	110
Total, 1st 310 institutions .....	364,392	379,905	383,886	380,291	371,809	365,649	358,579	355,182
311 University of Puerto Rico Med Sci Campus .....	113	89	132	128	144	135	96	110
312 Andrews University .....	131	163	157	139	133	144	111	98
313 Creighton University .....	71	77	93	53	120	129	93	98
314 Medical College of Georgia .....	82	84	88	96	93	100	101	98
315 Bryn Mawr College .....	154	123	120	111	115	114	108	97
316 Medical College of Ohio .....	0	0	52	227	148	155	112	94
317 Widener University .....	133	143	148	152	145	132	106	88
318 Rush University .....	90	98	103	100	100	77	75	85
319 Albany Medical College .....	70	88	96	95	102	93	96	80
320 Maharishi University of Management .....	76	64	51	48	33	35	48	78
Total, 1st 320 institutions .....	365,312	380,834	384,926	381,440	372,942	366,763	359,525	356,108
321 University of Nebraska Medical Center .....	60	69	76	81	84	87	86	78
322 Institute of Paper Science & Technology .....	70	73	77	79	83	76	68	74
323 University of San Diego .....	42	38	47	58	56	51	51	73
324 SUNY Health Science Center at Syracuse .....	68	64	72	71	65	68	68	72
325 SUNY Health Science Center at Brooklyn .....	98	119	104	94	82	76	78	66
326 Uniformed Serv Univ of the Hlth Sciences .....	88	71	66	57	58	55	63	62
327 CUNY Herbert H. Lehman College .....	61	53	65	72	41	70	52	57
328 RAND Graduate School of Policy Studies .....	60	55	61	55	56	52	49	54
329 University of the Pacific .....	59	51	48	54	51	55	50	49
330 Biola University .....	188	156	155	149	146	174	167	48
Total, 1st 330 institutions .....	366,106	381,583	385,697	382,210	373,664	367,527	360,257	356,741
331 Union College .....	144	137	124	98	73	59	37	42
332 Philadelphia Coll of Pharmacy and Sci .....	29	31	33	29	30	26	21	29
333 Institute of Textile Technology .....	30	28	34	29	25	27	28	27
334 Mass College of Pharmacy/Allied Health .....	24	24	20	20	20	20	23	23
335 Ponce School of Medicine .....	15	13	14	12	16	13	17	17
336 Morehouse School of Medicine .....	0	4	9	21	12	22	16	16
337 Baylor College of Dentistry .....	6	7	9	7	9	7	7	10
338 The Pontifical Cath Univ of Puerto Rico .....	0	0	15	20	20	10	11	10
339 Smith College .....	6	8	7	4	4	7	7	4
340 Atlanta University .....	0	0	0	0	0	0	0	0
Total, 1st 340 institutions .....	366,360	381,835	385,962	382,450	373,873	367,718	360,424	356,919
341 Charles R. Drew Univ of Medicine & Sci .....	0	0	0	0	0	0	0	0
342 Emerson College .....	0	0	0	0	0	0	0	0
343 Kirksville College of Osteopathic Med .....	0	0	0	0	0	0	0	0
344 Medical College of Pennsylvania, The .....	78	85	73	80	0	0	0	0
345 Midwestern University .....	0	0	0	0	0	0	0	0
346 Oral Roberts University .....	0	0	0	0	0	0	0	0
347 Pacific University .....	0	0	0	0	0	0	0	0
348 SUNY College of Optometry .....	0	0	0	0	0	0	0	0
349 U of North TX Hlth Sci Ctr at Ft Worth .....	0	0	0	0	0	0	0	0
350 Univ of Osteopathic Med & Health Sci .....	0	0	0	0	0	0	0	0
Total, 1st 350 institutions .....	366,438	381,920	386,035	382,530	373,873	367,718	360,424	356,919
351 Univ of Texas M.D. Anderson Cancer Ctr .....	0	0	0	0	0	0	0	0
352 University of New England .....	9	3	3	0	0	0	0	0
353 Xavier University of Louisiana .....	0	0	0	0	0	0	0	0
Total, 1st 353 institutions .....	366,447	381,923	386,038	382,530	373,873	367,718	360,424	356,919

**NOTE:** Includes medical schools

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 47. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	30,806	32,680	34,254	36,289	35,828	37,028	38,103	39,494
Total, science and engineering fields .....	22,813	23,829	24,605	25,734	26,087	26,513	26,896	27,359
Sciences, total .....	20,570	21,478	22,171	23,144	23,459	23,851	23,952	24,540
Physical sciences, total .....	5,691	5,758	5,640	5,849	5,829	5,803	5,864	5,892
Astronomy .....	210	206	219	246	276	312	317	357
Chemistry .....	3,647	3,564	3,555	3,710	3,637	3,568	3,703	3,691
Physics .....	1,814	1,949	1,827	1,849	1,820	1,837	1,745	1,805
Physical sciences, n.e.c. ....	20	39	39	44	96	86	99	39
Earth, atmos., & ocean sci., total .....	623	690	762	815	845	859	934	893
Atmospheric sciences .....	59	64	81	89	88	80	98	85
Geosciences .....	369	399	423	435	440	449	486	459
Oceanography .....	161	186	204	237	258	244	258	249
Earth, atmos., & ocean sci., n.e.c. ....	34	41	54	54	59	86	92	100
Mathematical sciences .....	206	201	224	239	259	326	302	274
Computer sciences .....	120	144	164	183	213	247	315	363
Agricultural sciences .....	565	630	698	705	688	665	692	656
Biological sciences, total .....	12,479	13,172	13,785	14,417	14,672	14,918	14,916	15,474
Anatomy .....	509	496	462	503	506	537	580	574
Biochemistry .....	2,120	2,157	2,368	2,379	2,409	2,466	2,531	2,524
Biology .....	1,398	1,475	1,460	1,576	1,601	1,633	1,537	1,725
Biometry/epidemiology .....	100	122	131	128	153	153	159	155
Biophysics .....	156	176	176	184	230	252	240	239
Botany .....	488	492	511	590	630	599	596	581
Cell biology .....	1,264	1,308	1,441	1,649	1,764	1,725	1,717	1,973
Ecology .....	49	60	65	88	95	107	131	108
Entomology/parasitology .....	236	223	223	190	179	183	216	181
Genetics .....	625	671	665	661	752	719	708	707
Microbio., immunology, & virology .....	1,715	1,784	1,881	1,924	1,943	1,975	2,019	2,109
Nutrition .....	171	196	210	192	186	198	209	234
Pathology .....	1,075	1,170	1,202	1,256	1,188	1,220	1,359	1,297
Pharmacology .....	1,153	1,286	1,327	1,375	1,401	1,418	1,333	1,427
Physiology .....	1,060	1,139	1,150	1,109	1,026	1,089	1,118	1,118
Zoology .....	161	165	174	171	164	135	108	140
Biosciences, n.e.c. ....	199	252	339	442	445	509	355	382
Psychology .....	507	523	520	546	577	589	567	606
Social sciences, total .....	379	360	378	390	376	444	362	382
Agricultural economics .....	39	49	46	45	39	56	50	32
Anthropology (cultural & social) .....	51	59	52	57	67	74	59	61
Economics (except agricultural) .....	40	22	38	46	27	16	19	29
Geography .....	15	22	28	26	16	22	12	18
Linguistics .....	14	26	29	20	16	36	19	18
Political science .....	78	49	35	44	36	35	32	62
Sociology .....	90	72	72	78	91	127	102	79
Sociology/anthropology .....	1	3	5	4	0	0	0	0
Social sciences, other .....	51	58	73	70	84	78	69	83
Engineering, total .....	2,243	2,351	2,434	2,590	2,628	2,662	2,944	2,819
Aerospace engineering .....	77	92	116	100	101	109	125	133
Agricultural engineering .....	35	37	39	45	46	48	58	56
Biomedical engineering .....	61	81	85	141	134	143	158	180
Chemical engineering .....	568	535	526	521	569	541	628	603
Civil engineering .....	185	187	181	210	200	230	240	216
Electrical engineering .....	339	313	383	407	378	393	504	497
Engineering science .....	117	71	78	95	101	93	115	110
Industrial/manufacturing eng. ....	27	38	63	53	29	28	27	30
Mechanical engineering .....	324	349	355	383	402	417	435	425
Metallurgical/materials eng. ....	392	450	403	441	490	496	464	393
Nuclear engineering .....	29	34	40	39	28	28	33	19
Engineering, other .....	89	164	165	155	150	136	157	157
Total, health fields .....	7,993	8,851	9,649	10,555	9,741	10,515	11,207	12,135
Clinical fields .....	6,366	7,065	7,614	8,329	7,428	8,019	8,539	9,417
Dental sciences .....	77	75	102	195	227	172	172	166
Nursing .....	28	28	40	48	43	23	38	43
Pharmaceutical sciences .....	475	486	534	575	504	509	513	521
Preventive medicine/community health .....	204	231	248	264	291	307	344	316
Speech pathology/audiology .....	41	47	49	40	53	46	36	57
Veterinary sciences .....	119	117	133	138	159	190	217	216
Other health fields .....	683	802	929	966	1,036	1,249	1,348	1,399

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 48. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions, by detailed field and primary source of support, and number of postdoctoral appointees without U.S. citizenship or permanent resident status : 1998**

Field	Total	Source of support					Number of post-doctoral appointees without U.S. citizenship or permanent resident status
		Federal				Non-Federal	
		Total	Fellowships	Trainee-ships	Research grants		
Total, all surveyed fields .....	39,494	27,141	4,049	2,840	20,252	12,353	20,014
Total, science and engineering fields .....	27,359	19,859	2,333	1,292	16,234	7,500	14,664
Sciences, total .....	24,540	17,903	2,220	1,271	14,412	6,637	12,774
Physical sciences, total .....	5,892	4,548	358	37	4,153	1,344	3,560
Astronomy .....	357	326	36	0	290	31	152
Chemistry .....	3,691	2,687	246	28	2,413	1,004	2,298
Physics .....	1,805	1,501	75	9	1,417	304	1,089
Physical sciences, n.e.c. ....	39	34	1	0	33	5	21
Earth, atmos., & ocean sci., total .....	893	749	71	12	666	144	370
Atmospheric sciences .....	85	80	0	0	80	5	33
Geosciences .....	459	362	27	7	328	97	196
Oceanography .....	249	222	43	5	174	27	102
Earth, atmos., & ocean sci., n.e.c. ....	100	85	1	0	84	15	39
Mathematical sciences .....	274	177	39	2	136	97	149
Computer sciences .....	363	265	36	0	229	98	181
Agricultural sciences .....	656	364	28	1	335	292	316
Biological sciences, total .....	15,474	11,212	1,574	1,084	8,554	4,262	7,949
Anatomy .....	574	438	53	58	327	136	297
Biochemistry .....	2,524	1,897	220	118	1,559	627	1,362
Biology .....	1,725	1,285	216	88	981	440	827
Biometry/epidemiology .....	155	116	20	69	27	39	45
Biophysics .....	239	179	30	12	137	60	101
Botany .....	581	391	46	0	345	190	325
Cell biology .....	1,973	1,379	276	71	1,032	594	894
Ecology .....	108	74	17	2	55	34	21
Entomology/parasitology .....	181	112	7	0	105	69	91
Genetics .....	707	452	105	53	294	255	374
Microbio., immunology, & virology .....	2,109	1,584	165	179	1,240	525	1,136
Nutrition .....	234	133	18	11	104	101	138
Pathology .....	1,297	784	99	150	535	513	706
Pharmacology .....	1,427	1,115	154	146	815	312	756
Physiology .....	1,118	896	98	101	697	222	640
Zoology .....	140	93	21	2	70	47	32
Biosciences, n.e.c. ....	382	284	29	24	231	98	204
Psychology .....	606	432	79	109	244	174	127
Social sciences, total .....	382	156	35	26	95	226	122
Agricultural economics .....	32	18	1	0	17	14	18
Anthropology (cultural & social) .....	61	20	6	0	14	41	12
Economics (except agricultural) .....	29	3	1	0	2	26	7
Geography .....	18	10	0	0	10	8	10
Linguistics .....	18	10	2	3	5	8	6
Political science .....	62	9	2	0	7	53	18
Sociology .....	79	49	6	19	24	30	14
Sociology/anthropology .....	0	0	0	0	0	0	0
Social sciences, other .....	83	37	17	4	16	46	37
Engineering, total .....	2,819	1,956	113	21	1,822	863	1,890
Aerospace engineering .....	133	95	9	1	85	38	76
Agricultural engineering .....	56	30	2	0	28	26	38
Biomedical engineering .....	180	147	12	11	124	33	106
Chemical engineering .....	603	413	43	2	368	190	415
Civil engineering .....	216	126	10	2	114	90	144
Electrical engineering .....	497	346	13	0	333	151	312
Engineering science .....	110	97	4	0	93	13	63
Industrial eng./manufacturing eng. ....	30	11	0	0	11	19	13
Mechanical engineering .....	425	286	4	2	280	139	322
Metallurgical/materials eng. ....	393	258	11	3	244	135	283
Nuclear engineering .....	19	19	0	0	19	0	11
Engineering, other .....	157	128	5	0	123	29	107

See explanatory information, if any, and SOURCE at end of table.

**Table 48. Science, engineering, and health postdoctoral appointees in doctorate-granting institutions, by detailed field and primary source of support, and number of postdoctoral appointees without U.S. citizenship or permanent resident status : 1998**

Field	Total	Source of support					Number of post-doctoral appointees without U.S. citizenship or permanent resident status
		Federal				Non-Federal	
		Total	Fellowships	Trainee-ships	Research grants		
Total, health fields .....	12,135	7,282	1,716	1,548	4,018	4,853	5,350
Clinical fields .....	9,417	5,589	1,485	1,250	2,854	3,828	4,150
Dental sciences .....	166	115	13	30	72	51	74
Nursing .....	43	27	3	21	3	16	3
Pharmaceutical sciences .....	521	340	20	16	304	181	311
Preventive medicine/community health .....	316	222	37	46	139	94	105
Speech pathology/audiology .....	57	44	6	9	29	13	20
Veterinary sciences .....	216	107	22	12	73	109	70
Other health fields .....	1,399	838	130	164	544	561	617

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 49. Nonfaculty research scientists, engineers, and health professionals with doctorates in doctorate-granting institutions, by detailed field: 1991-1998**

Field	1991	1992	1993	1994	1995	1996	1997	1998
Total, all surveyed fields .....	5,457	5,464	5,993	6,208	6,517	6,594	6,670	7,043
Total, science and engineering fields .....	4,517	4,381	4,800	4,988	5,176	5,150	5,209	5,250
Sciences, total .....	3,858	3,644	3,997	4,163	4,387	4,420	4,361	4,441
Physical sciences, total .....	1,000	1,066	1,223	1,244	1,374	1,288	1,204	1,081
Astronomy .....	66	70	100	151	158	154	144	122
Chemistry .....	474	472	538	522	538	548	504	482
Physics .....	459	523	584	569	658	568	554	473
Physical sciences, n.e.c. ....	1	1	1	2	20	18	2	4
Earth, atmos., & ocean sci., total .....	298	302	340	363	418	430	427	411
Atmospheric sciences .....	26	21	40	27	21	46	76	48
Geosciences .....	129	153	138	198	218	190	147	154
Oceanography .....	137	114	132	118	152	167	163	172
Earth, atmos., & ocean sci., n.e.c. ....	6	14	30	20	27	27	41	37
Mathematical sciences .....	84	70	52	72	93	88	92	88
Computer sciences .....	50	42	67	48	66	107	87	123
Agricultural sciences .....	197	189	170	251	228	209	203	155
Biological sciences, total .....	1,857	1,691	1,844	1,854	1,958	1,904	1,970	2,221
Anatomy .....	50	39	52	39	48	59	58	41
Biochemistry .....	351	284	294	270	337	322	330	329
Biology .....	250	265	324	325	324	315	294	390
Biometry/epidemiology .....	33	26	36	37	32	26	24	33
Biophysics .....	36	38	49	54	58	44	54	41
Botany .....	122	79	97	86	88	66	62	76
Cell biology .....	147	158	201	176	210	194	195	220
Ecology .....	26	19	21	14	21	18	20	13
Entomology/parasitology .....	78	64	74	59	60	51	55	53
Genetics .....	70	53	67	63	65	79	121	77
Microbio., immunology, & virology .....	150	159	155	206	187	195	231	216
Nutrition .....	86	60	56	81	63	56	54	43
Pathology .....	102	123	114	145	132	136	114	135
Pharmacology .....	150	116	142	128	169	164	151	288
Physiology .....	143	136	99	103	115	119	147	164
Zoology .....	40	30	20	29	16	13	15	18
Biosciences, n.e.c. ....	23	42	43	39	33	47	45	84
Psychology .....	192	152	171	203	146	232	200	225
Social sciences, total .....	180	132	130	128	104	162	178	137
Agricultural economics .....	13	12	14	15	12	17	27	31
Anthropology (cultural & social) .....	57	35	43	48	34	34	13	11
Economics (except agricultural) .....	6	6	3	3	9	16	6	3
Geography .....	4	6	6	9	4	11	17	14
Linguistics .....	49	9	5	8	2	4	11	5
Political science .....	3	7	3	2	6	15	10	3
Sociology .....	26	24	16	9	11	15	34	27
Sociology/anthropology .....	0	0	0	0	0	3	5	4
Social sciences, other .....	22	33	40	34	26	47	55	39
Engineering, total .....	659	737	803	825	789	730	848	809
Aerospace engineering .....	26	39	69	66	80	86	84	68
Agricultural engineering .....	12	10	5	23	27	15	19	28
Biomedical engineering .....	16	26	26	36	26	21	31	34
Chemical engineering .....	61	148	126	87	70	82	159	149
Civil engineering .....	54	52	67	54	66	69	66	61
Electrical engineering .....	121	123	135	159	175	144	168	154
Engineering science .....	16	16	34	30	37	38	50	49
Industrial/manufacturing eng. ....	20	17	7	6	3	2	7	5
Mechanical engineering .....	113	97	116	135	108	108	109	106
Metallurgical/materials eng. ....	147	131	142	139	120	95	83	120
Nuclear engineering .....	34	37	27	36	32	29	28	4
Engineering, other .....	39	41	49	54	45	41	44	31
Total, health fields .....	940	1,083	1,193	1,220	1,341	1,444	1,461	1,793
Clinical fields .....	646	717	718	786	898	947	972	1,245
Dental sciences .....	16	20	27	11	12	14	51	45
Nursing .....	2	9	5	8	7	15	16	12
Pharmaceutical sciences .....	83	81	115	101	118	99	97	98
Preventive medicine/community health .....	55	65	95	105	90	118	79	102
Speech pathology/audiology .....	7	7	13	12	20	14	13	26
Veterinary sciences .....	30	47	45	58	53	67	61	68
Other health fields .....	101	137	175	139	143	170	172	197

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 50. Graduate students in science, engineering, and health fields in historically black colleges and universities, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields .....	5,322	3,506	18	178	58	820	141	601
Total, science and engineering fields .....	4,458	3,060	9	146	44	491	129	579
Sciences, total .....	3,883	2,777	7	114	36	431	97	421
Physical sciences, total .....	344	229	0	16	5	13	17	64
Astronomy .....	0	0	0	0	0	0	0	0
Chemistry .....	201	124	0	7	4	8	8	50
Physics .....	123	91	0	9	0	5	9	9
Physical sciences, n.e.c. ....	20	14	0	0	1	0	0	5
Earth, atmos., & ocean sci., total .....	78	40	0	0	1	25	1	11
Atmospheric sciences .....	0	0	0	0	0	0	0	0
Geosciences .....	0	0	0	0	0	0	0	0
Oceanography .....	0	0	0	0	0	0	0	0
Earth, atmos., & ocean sci., n.e.c. ....	78	40	0	0	1	25	1	11
Mathematical sciences .....	150	107	0	7	3	21	3	9
Computer sciences .....	463	200	2	58	8	33	49	113
Agricultural sciences .....	175	137	0	1	3	20	8	6
Biological sciences, total .....	741	570	3	21	4	41	7	95
Anatomy .....	4	2	0	0	0	1	0	1
Biochemistry .....	20	17	0	1	0	1	0	1
Biology .....	379	315	1	9	4	22	0	28
Biometry/epidemiology .....	0	0	0	0	0	0	0	0
Biophysics .....	0	0	0	0	0	0	0	0
Botany .....	40	27	0	1	0	0	0	12
Cell biology .....	0	0	0	0	0	0	0	0
Ecology .....	0	0	0	0	0	0	0	0
Entomology/parasitology .....	0	0	0	0	0	0	0	0
Genetics .....	29	15	0	3	0	4	2	5
Microbio., immunology, & virology .....	44	36	0	2	0	1	5	0
Nutrition .....	92	48	2	3	0	4	0	35
Pathology .....	0	0	0	0	0	0	0	0
Pharmacology .....	46	39	0	1	0	1	0	5
Physiology .....	38	30	0	0	0	2	0	6
Zoology .....	0	0	0	0	0	0	0	0
Biosciences, n.e.c. ....	49	41	0	1	0	5	0	2
Psychology .....	611	399	0	6	4	160	1	41
Social sciences, total .....	1,321	1,095	2	5	8	118	11	82
Agricultural economics .....	27	23	0	0	0	0	0	4
Anthropology (cultural & social) .....	0	0	0	0	0	0	0	0
Economics (except agricultural) .....	52	24	0	2	1	0	0	25
Geography .....	0	0	0	0	0	0	0	0
Linguistics .....	0	0	0	0	0	0	0	0
Political science .....	727	610	0	3	3	72	6	33
Sociology .....	218	204	1	0	3	6	1	3
Sociology/anthropology .....	68	50	0	0	0	4	1	13
Social sciences, other .....	229	184	1	0	1	36	3	4
Engineering, total .....	575	283	2	32	8	60	32	158
Aerospace engineering .....	0	0	0	0	0	0	0	0
Agricultural engineering .....	0	0	0	0	0	0	0	0
Biomedical engineering .....	0	0	0	0	0	0	0	0
Chemical engineering .....	33	14	0	0	0	1	0	18
Civil engineering .....	83	37	2	8	5	19	6	6
Electrical engineering .....	120	64	0	0	1	5	21	29
Engineering science .....	0	0	0	0	0	0	0	0
Industrial/manufacturing eng. ....	54	37	0	9	1	4	3	0
Mechanical engineering .....	139	74	0	5	1	11	2	46
Metallurgical/materials eng. ....	0	0	0	0	0	0	0	0
Nuclear engineering .....	0	0	0	0	0	0	0	0
Engineering, other .....	146	57	0	10	0	20	0	59

See explanatory information, if any, and SOURCE at end of table.

**Table 50. Graduate students in science, engineering, and health fields in historically black colleges and universities, by detailed field, citizenship, and racial/ethnic background of U.S. citizens or permanent residents: 1998**

Field	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, health fields .....	864	446	9	32	14	329	12	22
Clinical fields .....	103	15	0	1	1	85	0	1
Dental sciences .....	0	0	0	0	0	0	0	0
Nursing .....	122	80	0	2	1	36	1	2
Pharmaceutical sciences .....	127	88	0	15	3	10	7	4
Preventive medicine/community health .....	31	25	0	0	0	6	0	0
Speech pathology/audiology .....	361	187	9	7	7	132	4	15
Veterinary sciences .....	18	15	0	3	0	0	0	0
Other health fields .....	102	36	0	4	2	60	0	0

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 51. Graduate students in science and engineering fields in historically black colleges and universities, by geographic distribution, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Geographic distribution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all institutions .....	4,458	3,060	9	146	44	491	129	579
New England .....	0	0	0	0	0	0	0	0
Connecticut .....	0	0	0	0	0	0	0	0
Maine .....	0	0	0	0	0	0	0	0
Massachusetts .....	0	0	0	0	0	0	0	0
New Hampshire .....	0	0	0	0	0	0	0	0
Rhode Island .....	0	0	0	0	0	0	0	0
Vermont .....	0	0	0	0	0	0	0	0
Middle Atlantic .....	0	0	0	0	0	0	0	0
New Jersey .....	0	0	0	0	0	0	0	0
New York .....	0	0	0	0	0	0	0	0
Pennsylvania .....	0	0	0	0	0	0	0	0
East North Central .....	0	0	0	0	0	0	0	0
Illinois .....	0	0	0	0	0	0	0	0
Indiana .....	0	0	0	0	0	0	0	0
Michigan .....	0	0	0	0	0	0	0	0
Ohio .....	0	0	0	0	0	0	0	0
Wisconsin .....	0	0	0	0	0	0	0	0
West North Central .....	19	7	0	0	1	10	1	0
Iowa .....	0	0	0	0	0	0	0	0
Kansas .....	0	0	0	0	0	0	0	0
Minnesota .....	0	0	0	0	0	0	0	0
Missouri .....	19	7	0	0	1	10	1	0
Nebraska .....	0	0	0	0	0	0	0	0
North Dakota .....	0	0	0	0	0	0	0	0
South Dakota .....	0	0	0	0	0	0	0	0
South Atlantic .....	2,423	1,662	9	104	26	201	94	327
Delaware .....	30	14	0	1	0	12	0	3
District of Columbia .....	595	431	0	24	3	15	13	109
Florida .....	218	145	2	5	6	28	32	0
Georgia .....	335	289	0	8	5	3	12	18
Maryland .....	238	114	0	1	4	40	1	78
North Carolina .....	806	549	6	56	7	84	29	75
South Carolina .....	0	0	0	0	0	0	0	0
Virginia .....	201	120	1	9	1	19	7	44
West Virginia .....	0	0	0	0	0	0	0	0
East South Central .....	1,150	696	0	37	9	200	9	199
Alabama .....	273	166	0	5	4	10	6	82
Kentucky .....	0	0	0	0	0	0	0	0
Mississippi .....	313	224	0	13	0	23	0	53
Tennessee .....	564	306	0	19	5	167	3	64
West South Central .....	866	695	0	5	8	80	25	53
Arkansas .....	0	0	0	0	0	0	0	0
Louisiana .....	443	337	0	0	0	71	24	11
Oklahoma .....	0	0	0	0	0	0	0	0
Texas .....	423	358	0	5	8	9	1	42

See explanatory information, if any, and SOURCE at end of table.

**Table 51. Graduate students in science and engineering fields in historically black colleges and universities, by geographic distribution, citizenship, and racial/ethnic background of U.S. citizens or permanent residents : 1998**

Geographic distribution	Total	Racial/ethnic background of U.S. citizens or permanent residents						Students with temporary visas
		Black non-Hispanic	American Indian/Alaskan Native	Asian/Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Mountain .....	0	0	0	0	0	0	0	0
Arizona .....	0	0	0	0	0	0	0	0
Colorado .....	0	0	0	0	0	0	0	0
Idaho .....	0	0	0	0	0	0	0	0
Montana .....	0	0	0	0	0	0	0	0
Nevada .....	0	0	0	0	0	0	0	0
New Mexico .....	0	0	0	0	0	0	0	0
Utah .....	0	0	0	0	0	0	0	0
Wyoming .....	0	0	0	0	0	0	0	0
Pacific .....	0	0	0	0	0	0	0	0
Alaska .....	0	0	0	0	0	0	0	0
California .....	0	0	0	0	0	0	0	0
Hawaii .....	0	0	0	0	0	0	0	0
Oregon .....	0	0	0	0	0	0	0	0
Washington .....	0	0	0	0	0	0	0	0
Outlying areas .....	0	0	0	0	0	0	0	0

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 52. Non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field: 1991-1998**

Field	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all black students								
Total, all surveyed fields .....	16,407	18,487	20,439	21,177	22,154	22,976	23,571	24,249
Total, science and engineering fields .....	13,691	15,445	17,118	17,611	18,283	19,071	19,352	19,653
Sciences, total .....	11,666	13,071	14,559	14,827	15,427	16,176	16,477	16,826
Physical sciences .....	699	807	843	856	897	986	952	910
Earth, atmos., and ocean sciences .....	141	202	227	203	219	223	206	206
Mathematical sciences .....	524	579	710	673	689	711	657	613
Computer sciences .....	1,093	1,108	1,168	1,182	1,155	1,278	1,302	1,352
Agricultural sciences .....	145	209	235	239	294	268	229	310
Biological sciences .....	1,317	1,493	1,737	1,709	1,879	2,010	2,171	2,186
Psychology .....	2,455	2,758	3,284	3,529	3,359	3,455	3,647	3,845
Social sciences .....	5,292	5,915	6,355	6,436	6,935	7,245	7,313	7,404
Engineering .....	2,025	2,374	2,559	2,784	2,856	2,895	2,875	2,827
Health fields .....	2,716	3,042	3,321	3,566	3,871	3,905	4,219	4,596
Black students in HBCUs								
Total, all surveyed fields .....	2,090	2,232	2,627	2,982	3,189	3,384	3,632	3,506
Total, science and engineering fields .....	1,959	2,075	2,433	2,768	2,906	3,174	3,279	3,060
Sciences, total .....	1,816	1,898	2,221	2,515	2,612	2,883	2,995	2,777
Physical sciences .....	190	179	211	231	253	279	286	229
Earth, atmos., and ocean sciences .....	24	30	42	30	38	34	43	40
Mathematical sciences .....	107	111	169	155	139	157	128	107
Computer sciences .....	189	200	190	227	210	217	219	200
Agricultural sciences .....	37	70	84	102	130	111	88	137
Biological sciences .....	278	306	403	453	492	543	593	570
Psychology .....	317	352	428	489	413	430	490	399
Social sciences .....	674	650	694	828	937	1,112	1,148	1,095
Engineering .....	143	177	212	253	294	291	284	283
Health fields .....	131	157	194	214	283	210	353	446
Percent in HBCUs								
Total, all surveyed fields .....	12.7	12.1	12.9	14.1	14.4	14.7	15.4	14.5
Total, science and engineering fields .....	14.3	13.4	14.3	15.7	15.9	16.6	16.9	15.6
Sciences, total .....	15.6	14.5	15.4	17.0	16.9	17.8	18.2	16.5
Physical sciences .....	27.2	22.2	24.9	27.0	28.2	28.3	30.0	25.2
Earth, atmos., and ocean sciences .....	17.0	14.9	18.5	14.8	17.4	15.2	20.9	19.4
Mathematical sciences .....	20.4	19.2	25.9	23.0	20.2	22.1	19.5	17.5
Computer sciences .....	17.3	18.1	16.3	19.2	18.2	17.0	16.8	14.8
Agricultural sciences .....	25.5	33.5	41.0	42.7	44.2	41.4	38.4	44.2
Biological sciences .....	21.1	20.5	23.1	26.5	26.2	27.0	27.3	26.1
Psychology .....	12.9	12.8	12.8	13.9	12.3	12.4	13.4	10.4
Social sciences .....	12.7	11.0	10.9	12.9	13.5	15.3	15.7	14.8
Engineering .....	7.1	7.5	8.2	9.1	10.3	10.1	9.9	10.0
Health fields .....	4.8	5.2	5.8	6.0	7.3	5.4	8.4	9.7

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 53. Non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field and sex: 1994-1998**

Field	Men					Women				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
<b>Total, all black students</b>										
Total, all surveyed fields .....	8,669	8,934	8,974	9,121	9,262	12,508	13,220	14,002	14,450	14,987
Total, science and engineering fields .....	8,049	8,211	8,253	8,337	8,347	9,562	10,072	10,818	11,015	11,306
Sciences, total .....	6,082	6,254	6,301	6,377	6,406	8,745	9,173	9,875	10,100	10,420
Physical sciences .....	497	529	550	508	479	359	368	436	444	431
Earth, atmospheric, and ocean sciences .....	118	117	116	105	105	85	102	107	101	101
Mathematical sciences .....	343	385	368	347	339	330	304	343	310	274
Computer sciences .....	696	652	718	767	768	486	503	560	535	584
Agricultural sciences .....	118	150	131	105	147	121	144	137	124	163
Biological sciences .....	671	691	725	783	791	1,038	1,188	1,285	1,388	1,395
Psychology .....	851	817	810	910	920	2,678	2,542	2,645	2,737	2,925
Social sciences .....	2,788	2,913	2,883	2,852	2,857	3,648	4,022	4,362	4,461	4,547
Engineering .....	1,967	1,957	1,952	1,960	1,941	817	899	943	915	886
Health fields .....	620	723	721	784	915	2,946	3,148	3,184	3,435	3,681
<b>Black students in HBCUs</b>										
Total, all surveyed fields .....	1,265	1,331	1,383	1,462	1,332	1,717	1,858	2,001	2,170	2,174
Total, science and engineering fields .....	1,226	1,273	1,343	1,396	1,229	1,542	1,633	1,831	1,883	1,831
Sciences, total .....	1,048	1,078	1,152	1,201	1,039	1,467	1,534	1,731	1,794	1,738
Physical sciences .....	127	145	161	151	114	104	108	118	135	115
Earth, atmospheric, and ocean sciences .....	12	16	14	17	20	18	22	20	26	20
Mathematical sciences .....	69	79	80	71	57	86	60	77	57	50
Computer sciences .....	125	92	105	117	108	102	118	112	102	92
Agricultural sciences .....	42	57	54	42	60	60	73	57	46	77
Biological sciences .....	187	194	202	218	186	266	298	341	375	384
Psychology .....	132	114	108	171	97	357	299	322	319	302
Social sciences .....	354	381	428	414	397	474	556	684	734	698
Engineering .....	178	195	191	195	190	75	99	100	89	93
Health fields .....	39	58	40	66	103	175	225	170	287	343
<b>Percent in HBCUs</b>										
Total, all surveyed fields .....	14.6	14.9	15.4	16.0	14.4	13.7	14.1	14.3	15.0	14.5
Total, science and engineering fields .....	15.2	15.5	16.3	16.7	14.7	16.1	16.2	16.9	17.1	16.2
Sciences, total .....	17.2	17.2	18.3	18.8	16.2	16.8	16.7	17.5	17.8	16.7
Physical sciences .....	25.6	27.4	29.3	29.7	23.8	29.0	29.3	27.1	30.4	26.7
Earth, atmospheric, and ocean sciences .....	10.2	13.7	12.1	16.2	19.0	21.2	21.6	18.7	25.7	19.8
Mathematical sciences .....	20.1	20.5	21.7	20.5	16.8	26.1	19.7	22.4	18.4	18.2
Computer sciences .....	18.0	14.1	14.6	15.3	14.1	21.0	23.5	20.0	19.1	15.8
Agricultural sciences .....	35.6	38.0	41.2	40.0	40.8	49.6	50.7	41.6	37.1	47.2
Biological sciences .....	27.9	28.1	27.9	27.8	23.5	25.6	25.1	26.5	27.0	27.5
Psychology .....	15.5	14.0	13.3	18.8	10.5	13.3	11.8	12.2	11.7	10.3
Social sciences .....	12.7	13.1	14.8	14.5	13.9	13.0	13.8	15.7	16.5	15.4
Engineering .....	9.0	10.0	9.8	9.9	9.8	9.2	11.0	10.6	9.7	10.5
Health fields .....	6.3	8.0	5.5	8.4	11.3	5.9	7.1	5.3	8.4	9.3

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 54. Full-time non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field: 1991-1998**

Field	1991	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996 <sup>1</sup>	1997 <sup>1</sup>	1998 <sup>1</sup>
Total, all black students								
Total, all surveyed fields .....	8,863	10,219	11,387	11,965	12,501	12,989	13,570	13,743
Total, science and engineering fields .....	7,692	8,904	9,903	10,343	10,668	10,986	11,411	11,264
Sciences, total .....	6,552	7,545	8,413	8,640	8,978	9,323	9,739	9,679
Physical sciences .....	529	630	690	709	729	769	741	725
Earth, atmos., and ocean sciences .....	97	128	142	129	136	130	138	136
Mathematical sciences .....	276	331	411	412	423	422	386	355
Computer sciences .....	446	411	460	465	485	475	494	469
Agricultural sciences .....	113	163	162	162	227	194	176	207
Biological sciences .....	997	1,119	1,348	1,369	1,450	1,513	1,734	1,663
Psychology .....	1,424	1,656	1,854	2,046	2,028	2,087	2,224	2,424
Social sciences .....	2,670	3,107	3,346	3,348	3,500	3,733	3,846	3,700
Engineering .....	1,140	1,359	1,490	1,703	1,690	1,663	1,672	1,585
Health fields .....	1,171	1,315	1,484	1,622	1,833	2,003	2,159	2,479
Black students in HBCUs								
Total, all surveyed fields .....	1,234	1,289	1,604	1,951	2,004	2,086	2,308	2,147
Total, science and engineering fields .....	1,158	1,201	1,484	1,807	1,841	1,954	2,070	1,834
Sciences, total .....	1,046	1,075	1,300	1,588	1,591	1,735	1,849	1,628
Physical sciences .....	136	130	178	188	198	217	215	185
Earth, atmos., and ocean sciences .....	12	11	24	15	8	9	22	17
Mathematical sciences .....	58	62	106	98	89	99	79	67
Computer sciences .....	93	90	93	113	92	90	114	81
Agricultural sciences .....	24	57	32	46	92	67	69	98
Biological sciences .....	212	228	333	375	380	419	470	413
Psychology .....	138	145	193	284	262	259	287	254
Social sciences .....	373	352	341	469	470	575	593	513
Engineering .....	112	126	184	219	250	219	221	206
Health fields .....	76	88	120	144	163	132	238	313
Percent in HBCUs								
Total, all surveyed fields .....	13.9	12.6	14.2	16.3	16.0	16.1	17.0	15.6
Total, science and engineering fields .....	15.1	13.5	15.2	17.5	17.3	17.8	18.1	16.3
Sciences, total .....	16.0	14.2	15.7	18.4	17.7	18.6	19.0	16.8
Physical sciences .....	25.7	20.6	25.6	26.5	27.2	28.2	29.0	25.5
Earth, atmos., and ocean sciences .....	12.4	8.6	16.9	11.6	5.9	6.9	15.9	12.5
Mathematical sciences .....	21.0	18.7	29.2	23.8	21.0	23.5	20.5	18.9
Computer sciences .....	20.9	21.9	20.2	24.3	19.0	18.9	23.1	17.3
Agricultural sciences .....	21.2	35.0	26.1	28.4	40.5	34.5	39.2	47.3
Biological sciences .....	21.3	20.4	24.6	27.4	26.2	27.7	27.1	24.8
Psychology .....	9.7	8.8	10.2	13.9	12.9	12.4	12.9	10.5
Social sciences .....	14.0	11.3	10.1	14.0	13.4	15.4	15.4	13.9
Engineering .....	9.8	9.3	12.2	12.9	14.8	13.2	13.2	13.0
Health fields .....	6.5	6.7	8.1	8.9	8.9	6.6	11.0	12.6

<sup>1</sup> For 1991 and earlier years, permanent residents were included under "students with temporary visas." Beginning in 1992, permanent residents were included with U.S. citizens or permanent residents.

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Table 55. Full-time non-Hispanic black U.S. citizen or permanent resident graduate students in science, engineering, and health fields in all institutions and historically black colleges and universities, by field and sex: 1994-1998**

Field	Men					Women				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
<b>Total, all black students</b>										
Total, all surveyed fields .....	5,114	5,212	5,245	5,382	5,322	6,851	7,289	7,744	8,188	8,421
Total, science and engineering fields .....	4,772	4,807	4,786	4,902	4,747	5,571	5,861	6,200	6,509	6,517
Sciences, total .....	3,607	3,691	3,695	3,787	3,712	5,033	5,287	5,628	5,952	5,967
Physical sciences .....	409	434	441	393	388	300	295	328	348	337
Earth, atmospheric, and ocean sciences .....	79	78	68	71	67	50	58	62	67	69
Mathematical sciences .....	208	242	221	208	206	204	181	201	178	149
Computer sciences .....	283	285	281	309	267	182	200	194	185	202
Agricultural sciences .....	82	105	83	83	88	80	122	111	93	119
Biological sciences .....	546	543	562	636	618	823	907	951	1,098	1,045
Psychology .....	507	489	497	541	590	1,539	1,539	1,590	1,683	1,834
Social sciences .....	1,493	1,515	1,542	1,546	1,488	1,855	1,985	2,191	2,300	2,212
Engineering .....	1,165	1,116	1,091	1,115	1,035	538	574	572	557	550
Health fields .....	342	405	459	480	575	1,280	1,428	1,544	1,679	1,904
<b>Black students in HBCUs</b>										
Total, all surveyed fields .....	867	848	865	941	820	1,084	1,156	1,221	1,367	1,327
Total, science and engineering fields .....	838	825	846	905	751	969	1,016	1,108	1,165	1,083
Sciences, total .....	683	662	707	755	606	905	929	1,028	1,094	1,022
Physical sciences .....	105	117	129	113	96	83	81	88	102	89
Earth, atmospheric, and ocean sciences .....	8	6	5	9	8	7	2	4	13	9
Mathematical sciences .....	39	51	51	45	41	59	38	48	34	26
Computer sciences .....	64	40	52	70	42	49	52	38	44	39
Agricultural sciences .....	23	35	30	34	38	23	57	37	35	60
Biological sciences .....	157	148	158	179	134	218	232	261	291	279
Psychology .....	72	63	58	77	63	212	199	201	210	191
Social sciences .....	215	202	224	228	184	254	268	351	365	329
Engineering .....	155	163	139	150	145	64	87	80	71	61
Health fields .....	29	23	19	36	69	115	140	113	202	244
<b>Percent in HBCUs</b>										
Total, all surveyed fields .....	17.0	16.3	16.5	17.5	15.4	15.8	15.9	15.8	16.7	15.8
Total, science and engineering fields .....	17.6	17.2	17.7	18.5	15.8	17.4	17.3	17.9	17.9	16.6
Sciences, total .....	18.9	17.9	19.1	19.9	16.3	18.0	17.6	18.3	18.4	17.1
Physical sciences .....	25.7	27.0	29.3	28.8	24.7	27.7	27.5	26.8	29.3	26.4
Earth, atmospheric, and ocean sciences .....	10.1	7.7	7.4	12.7	11.9	14.0	3.4	6.5	19.4	13.0
Mathematical sciences .....	18.8	21.1	23.1	21.6	19.9	28.9	21.0	23.9	19.1	17.4
Computer sciences .....	22.6	14.0	18.5	22.7	15.7	26.9	26.0	19.6	23.8	19.3
Agricultural sciences .....	28.0	33.3	36.1	41.0	43.2	28.7	46.7	33.3	37.6	50.4
Biological sciences .....	28.8	27.3	28.1	28.1	21.7	26.5	25.6	27.4	26.5	26.7
Psychology .....	14.2	12.9	11.7	14.2	10.7	13.8	12.9	12.6	12.5	10.4
Social sciences .....	14.4	13.3	14.5	14.7	12.4	13.7	13.5	16.0	15.9	14.9
Engineering .....	13.3	14.6	12.7	13.5	14.0	11.9	15.2	14.0	12.7	11.1
Health fields .....	8.5	5.7	4.1	7.5	12.0	9.0	9.8	7.3	12.0	12.8

**SOURCE:** National Science Foundation/Division of Science Resources Studies, Survey of Graduate Students and Postdoctorates in Science and Engineering